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JOURNAL
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“It will flourish, if naturalists, chemists, antiquaries, philologists, and men of science in different parts of *Asia*, will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish if such communications shall be long intermitted; and it will die away, if they shall entirely cease.”—

SIR WM. JONES.

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JOURNAL

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ASIATIC SOCIETY.

No. V. 1858.

*Comparative Vocabulary of the Languages of the broken Tribes of
Nepál.—By B. H. HODGSON, Esq., B. C. S.*

(Continued from vol. xxvi. p. 522.)

DECLENSION OF BÁHING PRONOUNS AND OF NOUNS.

I.—Of Pronouns.

1st Personal Pronoun.

1. Nom. I, Go.
2. Gen. Of me { Conjunct. { Disjunct.
 { Wa = my. { Wake = mine.
3. { Dat. { To me, } Go. No sign.
 { Ac. { Me, }
4. Loc. { In me, } Wake gwáre (interior).
 { Within me. }
5. Loc. { Into me, } Wake di (entering, resting in).
 { In me, }
6. Abl. From me. Wake ding (removal).
7. All. Towards me, Wake la (nearing).
8. — From towards me, Wake lang (departing).
9. — Towards me, Wake taure (behaving).
10. Soc. With me, { Wakenung } (society).
 { Gónung }
11. Priv. Without me, { Wake manthi } (privation).
 { Gomanthi }
12. Inst. By me, Go mí.
13. Loc. At, by me, Wa pumdi* (proximity. H. pás).

Dual.

1. Gósi, incl. Gósúkú, excl.
2. { Conjunct. { Disjunct.
 { Isi, incl. { Isike, incl.
 { Wási, excl. { Wásike, excl.
3. Gósi, incl. Gósúkú, excl.

* See remark in sequel. Taure, gwáre and púm, as substantives or quasi such, naturally take the genitival pronoun; and perhaps also la and lang = taraf and tarafse: but not so mí, di and ding which seem to be sheer case signs.

4. Isikegwáre, incl. Wásikegwáre, excl.
5. Isike di, incl. Wásike di, excl.
6. Isike ding, incl. Wásike ding, excl.
7. Isike la, incl. Wásike la, excl.
8. Isike lang, incl. Wásike lang, excl.
9. Gosi taure, incl. Gosuku taure, excl.
10. Gosi nung, incl. Gosuku nung, excl.
11. Gosi manthi, incl. Gosuku manthi, excl.
12. Gosi mi, incl. Gosuku mi, excl.
13. { Isi- } pumdi, { incl.
{ Wasi- } excl.

Plural.

1. Gó-i, incl. Góku, excl.
2. { Conjunct. } Disjunct.
{ Ike, incl. } Ikke, incl.
{ Wake, excl. } Wakke, excl.
3. Gó-i, incl. Goku, excl.
4. Ikegwáre, incl. Wakegwáre, excl.
5. Ike di, incl. Wake di, excl.
6. Ike ding, incl. Wake ding, excl.
7. Ike lá, incl. Wake lá, excl.
8. Ike lang, incl. Wáke lang, excl.
9. Ike taure, incl. Wake taure, excl.
10. Góí nung, incl. Goku nung, excl.
11. Góí manthi, incl. Goku manthi, excl.
12. Góí mi, incl. Goku mi, excl.
13. { Ike- } pumdi, { incl.
{ Wake- } excl.

2nd Pronoun.

1. Ga.
2. { Conjunct. } Disjunct.
{ I. } Ike.
3. Gá. No sign.
4. Ike gwáre.
5. Ike di.
6. Ike ding.
7. Ike la.
8. Ike lang.
9. Ike taure.
10. Ga nung.
11. Ga manthi.
12. Ga mi.
13. I pumdi.

Dual.

1. Gasi.
2. { Conjunct. } Disjunct.
{ Isi. } Isike.
3. Gasi. No sign.
4. Isi gwáre or Isike gwáre.
5. Isike di.
6. Isike ding.
7. Isike la.
8. Isike lang.
9. Isi taure or Isike taure.
10. Gasi nung.
11. Gasi manthi.

12. Gasi mi.
13. Isi pumdi.

Plural.

1. Gani.
2. { Conjunct. } Disjunct.
{ Ini. } Inike.
3. Gani. No sign.
4. Ini Gwáre.
5. Inike di.
6. Inike ding.
7. Inike la.
8. Inike lang.
9. Ini taure.
10. Gani nung.
11. Gani manthi.
12. Gani mi.
13. Ini pumdi.

3rd Personal.

1. Harem (all genders).
2. { Conjunct. } Disjunct.
{ A. } Ake.
{ Haremke, common.
3. Harem. No sign.
4. { Agwáre or Akegwáre.
{ Haremke gwáre.
5. Akedi. Haremdi.
6. { Akeding.
{ Haremke ding.

7. { Ake la.
 { Haremke la.
8. { Ake lang.
 { Haremke lang.
9. { Ake taure.
 { Haremke taure.
10. Harem nung.
11. Harem manthi.
12. Harem mi.
13. Apumdi. Haremke pumdi.

Dual.

1. Harem dausi.
2. { Conjunct. { Disjunct.
 { Asi. { Asike.
 { Harem dausike, common.
3. Harem dausi. No sign.
4. { Asi gwáre or Asike gwáre.
 { Harem dausike gwáre.
5. Asike di. Harem dausike di.
6. Asike ding. Harem dausike ding.
7. Asike la. Harem dausike la.
8. Asike lang. Harem dausike lang.
9. Asi taure. Harem dausike taure.
10. Harem dausi nung.
11. Harem dausi manthi.
12. Harem dausi mi.
13. { Asi pumdi.
 { Harem dausike pumdi.

Plural.

1. Harem dau.
2. { Conjunct. { Disjunct.
 { Ani. { Anike.
 { Harem dauke, common.
3. Harem dau. No sign.
4. { Ani gware. Anike gware.
 { Harem dauke gware.
5. Anike di. Harem dauke di.
6. Anike ding. Harem dauke ding.
7. Anike la. Harem dauke la.
8. Anike lang. Harem dauke lang.
9. Anike taure. Harem dauke taure.
10. Harem dau nung.
11. Harem dau manthi.
12. Harem dau mi.
13. { Ani pumdi.
 { Harem dauke pumdi.

Near demonstrative. This

1. Yam* (all genders).
2. { Conjunct { Disjunct.
 { Yamke. { Yamke meke.
3. Yam. No sign.

4. Yamke gware or Yam gware.
5. Yam di.
6. Yam ding.
7. Yamke la. Yam la.
8. Yamke lang. Yam lang.
9. Yamke taure. Yam taure.
10. Yam nung.
11. Yam manthi.
12. Yam mi.
13. Yamke pumdi.

Dual.

1. Yam dausi.
2. { Yam dausike.
 { Conj. and Disj.
3. Yam dausi. No sign.
4. Yam dausike gware.
5. Yam dausi di.
6. Yam dausi ding.
7. Yam dausike la.
8. Yam dausike lang.
9. Yam dausike taure.
10. Yam dausi nung.
11. Yam dausi manthi.
12. Yam dausi mi.
13. Yam dausike pumdi.

Plural.

1. Yam dau.
2. { Yam dauke.
 { Conj. and disj.
3. Yam dau. No sign.
4. { Yam dau gware.
 { Yam dauke gware.
5. Yam dau di.
6. Yam dau ding.
7. Yam dau (ke) la.
8. Yam dau (ke) lang.
9. Yam dauke taure.
10. Yam dau nung.
11. Yam dau manthi.
12. Yam dau mi.
13. Yam dauke pumdi.

Remote Demonstrative.

1. Myam† (all genders).
2. { Myamke, conj.
 { Myamke meke, disj.
4. Myam. No sign.
4. Myamke gwáre.
5. Myam di.
6. Myam ding.
7. Myamke la.
8. Myamke lang.

* Yam or yem and so Myam or myem. All vowel sounds are extremely vague. G-yem, the relative, is evidently a derivative of yem.

† Myam or Myem.

9. Myamke taure.
10. Myam nung.
11. Myam manthi.
12. Myam mi.
13. Myamke pumdi.

Dual.

1. Myam dausi.
2. { Myam dausike.
 { Conj. and disj. &c. like singular.

Plural.

1. Myam dau.
2. { Myam dauke.
 { Conj. and disj. &c. ut supra.

Interrogative and Distributive.

Who? What person? Any one: m. and f. Substantival and adjectival.*

1. Sú.
2. { Suke.
 { Conj. and disj. or
 { Sukemeke, disj.
3. Su. No sign.
4. Su gware.
5. Su di.
6. Su ding.
7. Sula. Sukela.
8. Su lang. Suke lang.
9. Su taure. Suke taure.
10. Su nung.
11. Su manthi.
12. Su mi.
13. { Su á pumdi.
 { Suke pumdi.

Dual.

1. Su dausi.
2. Su dausike, &c.

Plural.

1. Su dau.
2. Su dauke, &c.

Interrogative and Distributive Neuter.

What? What thing? Any thing: † Substantival and adjectival.

1. Mára.
2. Márake, &c.

Dual.

1. Mára dausi.
2. Mára dausike, &c.

Plural.

1. Mára dau.
2. Mára dauke, &c.

Relative of all genders.

He, she, who; that, which: substantival and adjectival.‡

1. Gyem.
2. Gyemke.

Dual.

1. Gyem dausi.
2. Gyem dausike, &c.

Plural.

1. Gyem dau.
2. Gyem dauke.

Reflective. Self.

1. Daubo or Dwábo.
2. Dwáho ke.
3. Dwábo. No sign.
4. Dwábo gware.
5. Dwábo di.
6. Dwábo ding.
7. Dwábo la.
8. Dwábo lang.
9. Dwábo taure.
10. Dwábo nung.
11. Dwáho manthi.
12. Dwáho mi.
13. Dwábo pumdi.

Dual and plural as before.

So also are declined Hwappe or Hauppe = all and every; Gisko = how many; and as many; Metti = so many; Dhé kono = many and much; Dékho = a few, a little; Gisko = whoever and whatever; Kwángnâme = other, another; Myem = the same (see *that*); Nimpho = both; and in a word, all primitive or personal pronouns. Possessive pronouns are formed from the genitives, except in the case of the 3 leading pronouns. I, thou, he or she or it, each of these has two distinct forms quite separate from the personals—thus go has wá = mei and meus, in English, of me and my; and wake = English mine. So also ga, the 2nd pronoun has í and íke, and harem the 3rd has á and áke. The first of these two possessive or genitival forms are pronominal adjectives or rather adjuncts of nouns and verbs (and adverbs also) by prefix and suffix respectively. The second are pronouns pro-

* Equal kon and kói. Hindi and Urdu.

† Equal kya and kuech.

‡ Equal jón and jó. The correlative is Myam = Tón and Tó. It is rarely used because of the relative character of the participles.

per, like mine. thine, in English.* The former are indeclinable: the latter, are declinable, like all other proper possessives, though with some confusion originating in the imperfect development of the inflective element, its frequent coincidence with the genitive sign, and the variableness of that sign.

However, the case signs generally and their mode of annexation being uniform, out of this essentially one declension order is obtained, despite the disturbing causes adverted to. I give here as a sample of the possessives.

Dauboke = own.

1. Dauboke.
2. { Caret?
- { Dwabokeke.†
3. Dauboke.
4. Dauboke gware.
5. Dauboke di.
6. Dauboke ding.
7. Dauboke la.
8. Dauboke lang.
9. Dauboke taure.
10. Dauboke nung.
11. Dauboke manthi.
12. Dauboke mi.
13. { Dauboke pumdi or Daubo á
- { pumdi.

Daubo = áp; dauboke = apna. *Apnaka* can only be separately expressed by the cacophonous iteration of the guttural. Nor is this defect remedied by the use of the conjunct pronouns, wá, í, á; for wádwbó myself gives wádwbóke, of myself and my own; and idwbó, thyself gives ídwbóke of thyself or thy own. See more on the genitive in the sequel.

II.—Declension of Nouns.

1st.—Substantives proper.

Wainsa, a man, m.

1. Wainsa.
2. { Wainsake, disjunct, or
- { Wainsa á, conjunct.
3. Wainsa. No sign.
4. { Wainsa gware or
- { Wainsa á gwáre.
5. Wainsa di.
6. Wainsa ding.
7. Wainsa la.
8. Wainsa lang.
9. Wainsa á taure.
10. Wainsa nung.
11. Wainsa manthi.
12. Wainsa mi.
13. Wainsa á pumdi.

Dual.

1. Wainsa dausi.
2. { Wainsa dausike, disjunct.
- { Wainsa ási, conjunct.
3. Wainsa dausi.
4. { Wainsa dausike gwáre.
- { Wainsa dau/i ási gware.
5. Wainsa dausi di.
6. Wainsa dausi ding.
7. Wainsa dausi la.
8. Wainsa dausi lang.
9. { Wainsa dausike taure.
- { Wainsa dausi ási taure.
10. Wainsa dausi nung.
11. Wainsa dausi manthi.
12. Wainsa dausi mi.
13. Wainsa dausi ási pumdi.

Plural.

1. Wainsa dau.
2. { Wainsa dauke, disjunct.
- { Wainsa dau áni,† conjunct.
3. Wainsa dau. No sign.

* The formation of these from the my, thy, series by the addition of "ki" or "ke" is quite Turkic. Wa = my, wá-ke = mine. So Turki Benim = my, benim-ki = mine. Only Báhing uses the conjunct form merely (quasi im, imki) of the pronoun which in that tongue moreover is a prefix, in Turki an affix, of nouns.

† Compare uskaka in Hindi and Urdu.

‡ Á, ási and áni are the conjunct forms attaching to nominative which follows genitive, thus Wainsa dau áni ming, or wainsa dauke áni ming = the wife of several men, literally men (of) their wife or woman. The use of the same form in the next case proves gwáre to be a substantive used as a preposition, like *bhitar* in Hindi: áni gware = their interior.

4. { Wainsa dauke gware.
Wainsa dau áni gware.
5. Wainsa dau di.
6. Wainsa dau ding.
7. Wainsa dau la.
8. Wainsa dau lang.
9. { Wainsa dau ke tanre or
Wainsa dau áni taure.
10. Wainsa dau nung.
11. Wainsa dau manthi.
12. Wainsa dau mi.
13. Wainsa dau áni pumdi.

So also is declined Mincha, a woman, and ming a wife, and all feminine nouns.

Declension of a Neuter.

Substantive.

Grokso, a tbing.

1. Grokso,
2. { Groksoke, disjunct.
Grokso-á, conjunct.
3. Grokso.
4. Grokso á gware.
5. Grokso di.
6. Grokso ding.
7. Grokso la.
8. Grokso lang.
9. Grokso á taure.
10. Grokso nung.
11. Grokso mantbi.
12. Grokso mi.
13. Grokso á pumdi.

Dual.

1. Grokso dausi.
2. { Grokso dausike, disjunct.
Grokso dausi ási, conjunct.
3. Grokso dausi, &c.

Plural.

1. Grokso dau.
2. { Grokso dauke or
Grokso dau áni, &c.

It results from the above that there is but one declension; that gender has no grammatical expression; that number, like case, is expressed by separate postpositions, number going first; that all nouns and pronouns take the signs of number, neuters as well as others; that some of the signs of case are still significant (gware the interior; taure, the top; pum, the side); that *ke* is the general genitive sign, but rarely used save when the noun stands alone, as in

reply to a question, thus, whose?—the man's, is suke, wainsake; that when two substantives come together, the former is the genitive and has properly no sign (no qualitative ever has), though the "ke" be sometimes superadded to the special denotator which is á, the 3rd pronoun (his, her, its), or dim whose sense is, in of. Dim expresses a relation of locality or inness (what is contained); á, almost all other sorts of relation. Dim is used conjunctively and disjunctively, as, of where the tooth? gylame khleu: of the moutb. sheödim. Both precede the second substantive or nominative—thus wainsa á ning = the man's name; grokso á syanda = the tbing's sound; rú dim khán = vegetables of the garden; bazar dim shéri = bazar rice or rice of the bazar; pu dim pwáku, water of the cup, so that this latter may be called the general way of expressing the relation of two substantives which are both named—the former the general way of expressing relation when the qualitative noun only is named, for genitives are all qualitives, e. g. singke = wooden; ramke = bodily; lastly, that pronouns and nouns are declined throughout and in all respects in the same way; there being no difference whatever between them. As to the genitive relation it should be further noted that the first of two substantives is by position alone a genitive; that very close connexion and dependance is expressed by á, e. g. the calf of the cow, gai á támi; that "ke" can be used with á, as wainsake á ning, the man's his name; that where ke is formative, as singke, = wooden, from sing, wood, its conjunctive use is indispensable like that of the ba and na, the participial formatives; thus syelke bétho, the iron blade;* neubá muryu, the or a good man (properly, the man who is good) from syel = iron (subs.) and neu, to be good. Observe further that the topical sign di, both asks and answers, as, ru dim khan, garden vegetables; and, of where? the garden's gýlam (or gýlame), rúdim.

In this latter instance we may observe

* Observe that the iron of the blade is bétho á syel or betho ke syel. But the point or haft of the blade is necessarily bétho á juju and betho á rising.

that, *gyéla* being where, the final *m* or *me* of *gyélam*, *gyélame*, has, in respect of adverbs, a genitival force and so in *di-m*, of in; and in qualitives we constantly find a similar termination (*bubum* = white; *lalam* = red; *Kwágnam* = other &c.), so that the *m* final is shown to be generally possessive; and more especially as its iteration (*bubumme* = the white one; *lalamme* = the red one; *kwag-namme* = the other one) expresses the disjunct form of the same relation. Thus, which one will you have? the red one or the green, *Agyeme blávi*, *lalamme ki gigimme*, a sample wherein the possessive *á* is welded to the relative pronoun, *gyem*. By turning to the participles it will be seen that all those which have not a sign of their own (*ba* or

na) are made participles by the annexation of the *m* or *me* particle. This is in fact the general attributive affix, and its suffixture transforms all qualitives (including adverbs) into substantives or words used substantivally, like the *hma gu* affix of Newari and like also the Dravirian *van*, *val*, which seem to me to be the unquestionable prototypes of the Prakritic, *wan*, *wal*, *war*, (*Gaon-wár*, *Sheto-wala*, *Gári wán*. *Marne wala*, &c.) I subjoin a few comparative samples drawn from Báling and Newári, which will also show that nearly any word in these tongues can be used substantivally, and that all qualitives, in particular, can by the appropriate affix be made substantival, e. g. *singke*, wooden; *sing-keme*, the wooden one.

English.

Bāhng.

Nevāri.

Hindī.

1. The one	{ Kwong-me, m. n. Kwong nimame, f.	1. { Caret.	1. { Mera wala, m. n.
2. Mine or my one	{ Wake-me, m. n. Wake nimame, f.	2. { Ji-hma, m. f.	2. { Meri wali, f.
3. The black	{ Kyakya-me, m. n. Kyakya nimame, f.	3. { Ji-gu, n.	3. { Kala wala, m. n.
4. The striker	{ Teupba-me, m. f.	4. { Hyaku-hma, m. f.	3. { Kali wali, f.
one or one that strikes	{ Teupba nimame, f.	4. { Hyaku-gu, n.	{ Kutne wala, m. n.
5. The wooden one	{ Teupcho-me, n.	4. { Da-hma, m. f.	
6. The anterior one	{ Singke-me, m. n. Singke nimame, f.	4. { Da-gu, n.	{ Kutne wali, f.
7. The posterior one	{ Gnalla-me, m. n. Gnalla nimame, f.	5. { Sinya-hma, m. f.	5. { Kath wala, m. n.
8. The here one	{ Notha-me, m. n. Notha nimame, f.	5. { Sinya-gu, n.	5. { Kath wali, f.
9. The there one	{ Eke-me, m. n. Eke nimame, f.	6. { Nhapaya-hma, m. f.	6. { Age wala, m. n.
10. The to-day's one	{ Meke-me, m. n. Meke nimame, f.	6. { Nhapaya-gu, n.	6. { Age wali, f.
11. The comer, the coming one	{ Ana-me, m. n. Ana nimame, f.	7. { Lipaya-hma, m. f.	7. { Piche wala, m. n.
12. The manlike one	{ Piba-me, m. n. Piba nimame, f.	7. { Lipaya-gu, n.	7. { Piche wali, f.
13. The masculine one	{ Wainsakho-me, m. n. Wainsakho nimame, f.	8. { Thanaya-hma, m. f.	8. { Uhan wala, m. n.
14. The lowland (being) one	{ Wainsake-me, m. n. Wainsake nimame, f.	8. { Thanaya-gu, n.	8. { Uhan wali, f.
15. The highland (being) one	{ Dheptecha-me, m. n. Dheptecha nimame, f.	9. { Anaya-hma, m. f.	9. { Uhan wala, m. n.
	{ Syertecha-me, m. n. Syertecha nimame, f.	9. { Anaya-gu, n.	9. { Uhan wali, f.
		10. { Thá wunya-hma, m. f.	10. { Aj wala, m. n.
		10. { Thá wunya-gu, n.	10. { Aj wali, f.
		11. { Wo-hma, m. f.	11. { Aue wala, m. n.
		11. { Wo-gu, n.	11. { Aue wali, f.
		12. { Mijangsu-hma, m. f.	12. { Mardsa wala, m.
		12. { Mijangsu-gu, n.	12. { Mardsa wali, f.
		13. { Mijangya-hma, m. f.	13. { Mardana wala, m.
		13. { Mijangya-gu, n.	13. { Mardana wali, f.
		14. { Kobiya-hma, m. f.	14. { Madhes wala, m. n.
		14. { Kobiya-gu, n.	14. { Madhes wali, f.
		15. { Choya-hma, m. f.	15. { Parbat wala, m. n.
		15. { Choya-gu, n.	15. { Parbat wali, f.

English.

Báling.

Newári.

Hindí.

16. The handsome one	{ Rimba-me, m. n. Rimba nimame, f. or Rimsokpa-me, m. Rimsongma-me, f.	{ Bangla-hma, m. f. Bangla-gu, n.	16. { Sunder wala, m. Sunder wali, f.
17. The young one	{ Bebacha-me, m. Bebacha nimame, f.	17. { Mochacha-hma. Mochacha-gu.	17. { Chota wala, m. n. Choti wali, f.
18. The adult one	{ Swalocha-me, m. Swalomi-me, f. Gnáwame, m. Gnámi-me, f.	18. { Lyáye-hma-hma, m. Lyáseh-ma, f. Jyatha-hma, m. Jyáthi-hma, f.	18. { Siyán wala, m. Siyán wali, f. Budha wala. Budhi wali, f.
20. The Tibetan one (being)	{ Leucha-me, m. Leucha nimame, f.	20. { Sanya-hma, m. f.	20. { Bhot wala, m. n. Bhot wali, f.
21. Tibetan one (thing)	{ Leucha dyaldim-me, n.	21. { Sanya-gu, n.	21. { Bhotka wala.
22. The household one	{ Kbyimcha-me, m.	22. { Chhenya-hma, m. f.	22. { Gharwala, m. n.
23. The domestic one	{ Kbyimcha nimame, f.	23. { Chhenya-gu, n.	23. { Ghar wali, f.
24. The wild one	{ Sabalacha-me, m. n.	24. { Gunya-hma, m. f.	24. { Jangal wala, m.
25. The good one	{ Sabalacha nimame, f.	25. { Gunya-gu, n.	25. { Jangal wali, f.
26. The white one	{ Neuba-me, m. n. Neuba-nimame, f.	26. { Bhing-hma, m. f. Bhing-gu, n.	26. { Achha wala, m. n. Acchi wali, f.
27. The son-in-law's	{ Bubú jokpa-me, m. Bubú jongma-me, f. or Bubum-me, m. n. Bubum nimame, f.	27. { Toyu-hma, m. f. Toyu-gu, n.	27. { Shéto wala, m. n. Sbėti wali, f.
28. The daughter-in-law's	{ Lichake-me, m. Lícha nimakeme, f.	28. { Lipajonghma-hma, m. f. Lipajonghma-gu, n. Jichaya-hma, m. f.	28. { Dhanuk walaka, m. Dhanuk walika, f. Dámád wala, m.
29. The son-in-law's	{ Dyel chake-me, m.	29. { Jichaya-gu, n.	29. { Dámád wali, f.
30. The daughter-in-law's	{ Dyel mikeme, f.	30. { Bohumochaya-hma, m. f. Bohumochaya-gu, n.	30. { Patho wala, m. Patho wali, f.

Remark.—The above list affords, it will be seen, collateral information as to the formation of gender in qualitatives used substantivally. It also shows that the formative suffix *cha* is apt to be equivalent for the suffix, *me*, *m*; and as *cha* still leaves a substantival word (e. g. *Khyim-cha* = householder; *Lí-cha* = bowman) the genitival sign *ke* is often introduced before final *me*, to express possessiveness, as, whose bow is that? the bowman's, *suke lí, lícbakeme*. But *Lícha* being bowman, *líchame* may be used for bowman's. *Newári* avoids all vagueness by its *hma* and *gu* signs, repeated to ties quotes with the genitive sign *ya*, e. g. *Ji-hma*, mine, *m*. and *f*. *Ji-gu*, mine, *n*. *Ji hma ya hma*, *Ji hma ya gu*, *Ji hma ya hma ya*, *Ji hma ya gu ya*, *Ji gu ya hma ya*, *Ji gu ya gu ya*, &c. express any number of variations in the possession of beings and things: and so also in all qualitatives used substantivally, thus, *toyu hma ya hma*, the white man's animal, *toyu hma ya gu*, the white man's thing, *toyu hma ya gu ya*, of the white man's thing, &c. Compare *Bahing khyim-cha-me* with *Newári Chhen-ya-hma* and it will be seen that *cha* = *ya* has a quasi adjectival force though *khyimcha* mean house-holder. Such vagueness is normal.

CLASSIFICATION OF BAHING VERBS.

I.—Transitives in “*wo*.” Infinitive *Bla-cho*, to take. Imperative *blawo*, take it.

<i>Indicative active, Sing. number.</i>		<i>Indicative passive, Sing. number.</i>		<i>Causal imperative.</i>
<i>Present.</i>	<i>Preterite.</i>	<i>Present.</i>	<i>Preterite.</i>	
1. <i>Bla-gna.</i>	1. <i>Blaptong.</i>	1. <i>Blayi (i).</i>	1. <i>Blati.</i>	<i>Bla-páto</i> , tr.
2. <i>Blayi (i).</i>	2. <i>Blapteu.</i>	2. <i>Blaye (e).</i>	2. <i>Blate.</i>	<i>Bla-paso</i> , r.
3. <i>Blawa.</i>	3. <i>Blapta.</i>	3. <i>Blawa.</i>	3. <i>Blata.</i>	<i>Bla-payi</i> , p.*

Thus are conjugated *Méwo*, to vomit. *Cheuwo*, to grill. *Gíwo*, to give. *Séwo*, to saw. *Chwéwo*, to burn corpse. *Bláwo*, to scatter. *Táwo*, to get or find. *Jáwo* and *Báwo*, to eat. *Khí-wo*, to quarrel with. *Kú-wo*, to steal. *Kíwo*, to cook. *Pá-wo*, to do. *Leu-wo*, to kiss (coitus). *Sí-wo*, to seize. *Té-wo*, to spit on. *Mó-wo*, to fight. *Wódipa-wo*, to assay and all compounds of like kind, i. e. of a noun and the verb to do or make.

Intransitives in “*wo*.” Infinitive *Pícho*, to come. Imperative *Píwo*, come.

1. <i>Pí-gná.</i>	<i>Pí-ti.</i>	”	”	<i>Pí-pato</i> , tr.
2. <i>Pi-yé (e).</i>	<i>Pí-té.</i>	”	”	<i>Pí-paso</i> , ref.
3. <i>Pí.</i>	<i>Pí-tá.</i>	”	”	<i>Pí-payi</i> , pas.

Thus are conjugated *Rá-wo*, to come. *Glewo*, to be hot. *Hó-wo*, to be lighted. *Ká-wo*, to be bitter. *Lá-wo* and *Dí-wo*, to go. *Kú-wo*, to come up (slope). *Yú-wo*, to come down (slope). *Khí-wo*, to tremble. *Neu-wo*, to be good. *Deu-wo*, to be reconciled. *Shéo-wo*, to decrease or decay. *Syé neuwo*, to be fat. *Bhlú-wo*, to slip or slide down. *Shú-wo*, to itch. *Jí-wo*, to be ripe, &c.

II.—Transitives in “*gno*.” Infinitive *Kwó-cho*, to see. Imperative *Kwógno*, see it.

1. <i>Kwó-gnú.</i>	<i>Kwó-tóng.</i>	1. <i>Kwó-yí (í).</i>	<i>Kwó-tí.</i>	<i>Kwó-pa-to</i> , tr.
2. <i>Kwó-gní.</i>	<i>Kwó-t-éu.</i>	2. <i>Kwó-gné (é).</i>	<i>Kwó-té.</i>	<i>Kwó-pa-so</i> refl. or middle.
3. <i>Kwó.</i>	<i>Kwó-tá.</i>	3. <i>Kwó.</i>	<i>Kwó-ta.</i>	<i>Kwó-pa-yi</i> , pas.

* The causal forms are the same throughout; *pato*, following the mutable transitives in “to;” *paso*, all intransitives whatever in “so;” and *páyi* (*pá-í*) all possessives in *í. yí* for euphony.

This classification rests on the Indicative singular. The infinitive and imperative and causal are given chiefly as clues to the root and to the euphonic changes. The form of the classification is throughout the same, 1, 2, 3 refer to the three persons.

Thus are conjugated só-gno, to tell. Lé-gno, to sell. Tú-gno, to drink (water). Chó-gno, to cultivate and to pay debt. Phlí-gno, to send, &c.

Intransitives in "gno." Infinitive, Glwau-cho, to win. Imperative, Glwau-gno, win.

<i>Indicative active, sing. number.</i>		<i>Indicative passive, sing. number.</i>		<i>Causal.</i>
<i>Present.</i>	<i>Preterite.</i>	<i>Present.</i>	<i>Preterite.</i>	<i>Imperative.</i>

1. Glwau-gna.	Glwau-ti.	"	"	Glwau-pa-to, tr.
2. Glwau-gne.	Glwau-te.	"	"	Glwau-pa-so, refl.
3. Glwau.	Glwau-tá.	"	"	Glwau-pa-yi, pas.

Thus are conjugated Rú-gno, to be filled (belly) or satisfied. Lé-gno, to return, Wo-gno, to enter. Glú-gno, to issue. Ming-gno, to be ripe. Bro-gno, to be flavoursome.

III.—Transitives in "ko." Infinitive, Pok-cho, to make get up, or raise (not lift). Imperative, Pokko, raise him.

1. Pó-gú.	Pók-tóng.	1. Póng-yi? (i).	Pók-ti.	Pong-pato.	} ut supra.
2. Pó-gí.	Pók-teu.	2. Pong-ye.	Pók-te.	Pong-paso.	
		Pó-nyé.			
3. Pó-gá.	Pók-ta.	3. Pó-gá.	Pók-ta.	Pong-payi.	

Thus are conjugated Tuk-ko, to lick. Chuk-ko, to bind. Rik-ko, to reap. Kik-ko, to beget. Hik-ko, to count. Kú-ko, to crooken. Yok-ko, to share out. Prwak-ko, to unknot. Nok-ko, to rub. Tok-kon, to make fall. Hok-ko, to open. Jik-ko, to break. Pwak-ko vel Pukko, to burst. Ryak-ko, to write or colour. Jak-ko, to know. Khryak-ko, to enrage and to revile. Rik-ko, to reap. Kok-ko, to dig. Ruk-ko, to eradicate. Tyak-ko, to hinder. Wok-ko, to flay. Khlyak-ko, to plaster. Phwak-ko, to separate. Chyak-ko, to divide. Pík-ko, to pour or put in. Dwak-ko, to swallow.

N. B.—The double k is doubtful.

Intransitives in "ko." Infinitive, Bok-cho, to get up. Imperative, Bok-ko, get up.

1. Bóng-gna.	Bók-ti.	"	"	Bong-pa-to	} ut supra.
2. Bóng-gue, nye.	Bók-te.	"	"	Bong-pa-so	
3. Bóng.	Bók-ta.	"	"	Bong-pa-yi	

Thus are conjugated Gruk-ko, to be quick. Jwak-ko, to arrive. Jik-ko, to be broken, (u and a). Buk-ko, to be burst. Bwak-ko, to remain and to speak. Gú-ko, to be crooked. Phok-ko, to be sour. Gwak-ko, to walk. Duk-ko, to move or shake. Prok-ko, to jump, or leap. Byak-ko, to die. Gik-ko, to be born. Gnwak-ko, to weep. Dwak-ko, to desire, Dok-ko, to fall from aloft (being only). Here again the double k is doubtful, e. g. Dóko or Dokko: et sic decet.

IV.—Transitives in "ro." Infinitive, Phyér-cho, to sew. Imperative, Phér-ro, sew it.

1. Phyér-ú.	Phyér-tong.	1. Phyér-yi (i).	Phyér-ti.	Phyér-pato	} ut supra.
2. Phyér-i.	Phyér-t-eu.	2. Phyér-e.	Phyér-te.	Phyér-paso	
3. Phyér.	Phyér-ta.	3. Phyér.	Phyér-ta.	Phyér-payi	

Thus are conjugated Chwarro, to cut. Kurro, to carry. Tyarro, to suffer, endure. Khwarro, to shave or scrape or scratch (violently). N. B.—Iterate final "r" is doubtful.

Intransitives in "ro." Infinitive, Byar-cho, to fly. Imperative, Byarro, fly.

1. Byar-gná.	Byar-t-i.	"	"	Byar-pato	} ut supra.
2. Byar-é.	Byar-t-e.	"	"	Byar-paso	
3. Byar.	Byar-t-a.	"	"	Byar-payi	

Thus are conjugated Bárro, to increase. Chyárro, to shine, as sun, &c.

V.—Transitives in “lo.” Infinitive, Jyul-cho, to place. Imperative, Jyullo, place it.

<i>Indicative active, sing. number.</i>		<i>Indicative passive, sing. number.</i>		<i>Causal.</i>
<i>Present.</i>	<i>Preterite.</i>	<i>Present.</i>	<i>Preterite.</i>	<i>Imperative.</i>

1. Jyul-u.	Jyul-tong.	1. Jyul-yi.	Jyul-ti.	Jyul-pato	} ut supra.
2. Jyul-i.	Jyul-teu.	2. Jyul-e.	Jyul-te.	Jyul-paso	
3. Jyul.	Jyul-ta.	3. Jyul.	Jyul-ta.	Jyul-payi	

Thus are conjugated Syallo, to snatch away. Theullo, to cherish. Yallo, to rub. Limo challo, to tell lies. N. B.—The iterate final consonant again doubtful.

Intransitives in “lo.” Infinitive, Bál-cho, to be tired. Imperative, Bállo, be tired.

1. Bál-gna.	Bál-ti.	„	„	Bál-pato	} ut supra.
2. Bál-e.	Bál-te.	„	„	Bál-paso	
3. Bál.	Bál-ta.	„	„	Bál-payi	

Thus are conjugated Hyállo, to be heavy, &c.

VI.—Transitives in “po.” Infinitive, Teup-cho, to beat. Imperative, Teuppo, beat him.

1. Teub-u.	Teup-tong.	1. Teum-yi (i).	Teup-ti.	Teum-pato	} ut supra.
2. Teub-i.	Teup-teu.	2. Teum-é.	Teup-te.	Teum-paso	
3. Teub-a.	Teup-ta.	3. Teub-á.	Teup-ta.	Teum-payi	

Thus are conjugated Gup-po, to lift (a light thing). Bippo, to suck. Syappo, to wash and sharpen. Khuppo, to collect. Jyappo, to buy. Thappo, to weigh. Chappo, to can it, to be able for any work. Nippo, to express. Appo, to shoot. N. B.—The iterate consonant doubtful.

Intransitives in “po.” Infinitive Rap-cho, to stand. Imperative, Rappo, stand up.

1. Ram-gna.	Rap-ti.	„	„	Ram-pato	} ut supra.
2. Ram-é.	Rap-te.	„	„	Ram-paso	
3. Ram.	Rap-ta.	„	„	Ram-payi	

Thus are conjugated Ippo, to sleep. Ryippo, to be ended or to end, n. Dhappo, to shine as sun. Deuppo, to be combust. Jippo, to be rotten, &c.

VII.—Transitives in “mo.” Infinitive, Lam-cho, to search. Imperative, Lammo, search for it.

1. Lam-u.	Lam-tong.	1. Lam-yi (i).	Lam-ti.	Lam-pato	} ut supra.
2. Lam-i.	Lam-teu.	2. Lam-e.	Lam-te.	Lam-paso	
3. Lam.	Lam-ta.	3. Lam.	Lam-ta.	Lam-payi	

Thus are conjugated Nam-mo, to smell. Theum-mo, to finish or cause to become. Khleummo, to transplant. Phemmo, to take in one's arms. Sheummo, to cover. Thimmo, to bury. Hammo, to spread. Here again the iterate consonant is doubtful. This conjugation agrees with IV. and V. See remark at VIII.

Intransitives in “mo.” Infinitive, Dyum-cho, to become. Imperative, Dyummo, become.

1. Dyum-gna.	Dyum-ti.	„	„	Dyum-pato	} ut supra.
2. Dyum-é.	Dyum-te.	„	„	Dyum-paso	
3. Dyum.	Dyumta.	„	„	Dyum-payi	

Thus are conjugated Rimmo, to be handsome. Dyammo, to be full. Hammo, to be light (levis). Khummo, to stoop. Ryammo, to be emaciated, or thin. N. B.—Double consonant doubtful.

VIII.—Transitives in “no.” Infinitive, Pun-cho, to beg. Imperative, Pun-no, beg it.

1. Pun-u.	Pun-tong.	1. Pun-yi.	Pun-ti.	Pun-pato	} ut supra.
2. Pun-i.	Pon-teu.	2. Pun-e.	Pun-te.	Pun-paso	
3. Pun.	Pun-ta.	3. Pun.	Pun-ta.	Pun-payi	

Thus are conjugated Ninno, to hear. Plenno, to release or set at liberty. Salepanno, to spin, &c.

N. B.—This agrees with the last. Hence IV. V. VII. VIII. are one, and it seems likely that the common imperative sign should be “o,” however near that be to “wo” or the sign of the very different first conjugation. The four specified agree moreover in not being subject to any euphonic changes in conjugation. They might be unitized as transitives in a liquid or nasal.

Intransitives in “no” Infinitive, Wan-cho, to run. Imperative, Wan-no, run.

Indicative active, sing. number. Indicative passive, sing. number. Causal.
Present. Preterite, Present. Preterite. Imperative.

1. Wan-gna.	Wan-ti.	”	”	Wan-pato	} ut supra.
2. Wan-é.	Wan-te.	”	”	Wan-paso	
3. Wan.	Wan-ta.	”	”	Wan-payi	

Thus are conjugated Blenno, to live, &c. N. B.—Here as before, the doubling of the consonant is doubtful.

IX.—Transitives in “to.” Infinitive Brécho, to summon. Imperative, Bré-to, summon him.

1. Brét-u.	Bréttong.	1. Brét-i.	Brétti.	Bré-pato	} ut supra.
2. Brét-i.	Brétteu.	2. Brét-e.	Brétte.	Bré-paso	
3. Brét-a.	Brétta.	3. Brét-a.	Brétta.	Bre-payi	

So are conjugated Ríto, to laugh at. Dáto, to catch. Níto, to set down. Khleuto, to conceal. Neuto, to make good. Mú-to, to blow (hreath). Khúto, to touch. Grúk-to, to quicken. Bí-to, to obey. Rok-to, to lift. Dwak-to, to approve. Khryapto, to kindle. Rik-to, to contain. Gap-to, to add to. Duk-to, to shake it or cause to shake. Grepto, to throw. Dapto, to taste. Nyapto, to shove. Mimto, to remember. Bláto, to dry at fire. Jíto, to wet. Chamto, to amuse. Teuto, to know. Yokto, to remove. Le-to, to take back. Syanto, to recognise. Hanto, to cheat. Játo, to stop, detain. Khlamto, to spoil. Lwakto, to put upon. Bapto, to scratch for esse. Plepto, to fold. Timto, to squeeze. Lipto, to turn over. N. B.—Those which have a consonant before the sign, as Rok-to, Dap-to, Dwak-to, Cham-to, Han-to and Khlam-to, &c. do not double the “t” in the preterite of either voice; and consequently, in the passive, there is no mark of the distinction of time, e. g. Dapti, is I am tasted and I was tasted;* and, again, Daptu is I taste, Daptong, I tasted, but Dapta, is he tastes or he tasted—the last, however, is a general trait.

X.—Transitives in “to” which change the “t” into “d.” Infinitive, Sá-cho, to kill. Imperative, Sá-to, kill him.

1. Sád-u.	Sátong.	1. Sáyi.	Sáti.	Sá-pato	} ut supra.
2. Sád-i.	Sáteu.	2. Sáne.	Sáte.	Sá-paso	
3. Sád-a.	Sáta.	3. Sada.	Sáta.	Sa-payi	

Thus are conjugated Wá-to, abandon or leave. Tá-to, to kick. Yéto, to split. Úto, to fell. Lá-to, to take away. Páto, to do for another. Krá-to, to bite. Kléo-to, to undress. Móto, to tell. Chító, to tear. Píto, to bring. Kú-to, to bring up. Limléto, to feel. Yú-to, to bring down. Já-to, to make steady or firm. Phú-to, to sow. Náto and Préto, to gather. Phá-to, to exchange. Kbrí-to, to grind. Hó-to, to pierce. Hé-to, to distil.

* In such cases the sense is determined by the use of the separate prefixed pronouns in the instrumental and objective respectively. Difference of time by an adverb.

Intransitives in "to." Infinitive, Gní-cho, to be afraid. Imperative, Gní-to, be afraid.

<i>Indicative active, sing. number.</i>		<i>Indicative passive, sing. number.</i>		<i>Causal.</i>
<i>Present.</i>	<i>Preterite.</i>	<i>Present.</i>	<i>Preterite.</i>	<i>Imperative.</i>
1. Gní-gna.	Gní-ti.	"	"	Gní-pato
2. Gní-ne.	Gní-te.	"	"	Gní-paso
3. Gní.	Gní-ta.	"	"	Gní-payi

} ut
supra.*

So are conjugated Jí-to, to be torn. Khá-to, to be in pain. U-to, to fall (on ground). Sheö-to, to lose. Lé-to, to return. Jyukokáto, to flee. Héto, to be sharp. Bré-to, to vociferate.

XI.—Neuters in "to." Infinitive, Bo-cho, to flower. Imperative, Bo-to, flower.

1. Bót-u.	Bótti.	"	"	Bó-pato
2. Bót-i.	Bótte.	"	"	Bó-paso
3. Bót-a.	Botta.	"	"	Bó-payi

} ut
supra.

Thus are conjugated Khíto, to blow as wind. Síto, to fruit. Wamto, to sink or set as sun. But the last gives, owing to the consonant before the sign. Wamtu, Wamti, Wamta: Wamti, Wamte, Wamta. Infinitive, wam-cho. (See Kwádo and Sódo). Sí-to is often conjugated Sidu, Sidi, Sida; Siti, Site, Sita.

XII.—Transitives in "to." Infinitive, Gram-cho, to hate. Imperative, Gram-do, hate him.

1. Gramdu.	Gramtong.	1. Gramdi.	Gramti.	Gram-pato
2. Gramdi.	Gramteu.	2. Gramde.	Gramte.	Gram-paso
3. Gramda.	Gramta.	3. Gramda.	Gramta.	Gram-payi

} ut
supra.

Thus are conjugated Chyurdo, to wring. Rimdo, to expect. Cháyindo or Chýndo, to teach. Kwádo, to put on the fire. Wando, to put or pour in. Wádo, to throw away. Plendo, to forget. Chamdo, to divert, amuse. Glundo, to extract or take out. Jyuldo, to place for another. Tundo, to cause to drink. Sódo, to tell for another. Gremdo, to roast. Heldo, to mix. But Kwádo and Sódo, having no consonant before the sign; double the t, as in IX. thus

1. Só-du.	Sóttong.	1. Só-di.	Sótti.	Só-pato.
2. Só-di.	Sótteu.	2. Só-de.	Sótte.	Só-paso.
3. Só-da.	Sótta.	3. Só-da.	Sótta.	Só-payi.

N. B.—This, like Sógno of conjugation II. makes infinitive Só-cho and causal Só-pato, &c. and in fact the various modifications of the verbs by voice and in the peculiar manner here in question (so-gno, tell; so-do, tell for another) are sadly deficient in correspondent forms of the infinitive and participles. See on.

Intransitives in "do." Infinitive, Myel-cho, to be sleepy. Imperative, Myel-do, be sleepy.

1. Myeldu.	Myelti.	"	"	Myel-pato
2. Myeldi.	Myelte.	"	"	Myel-paso
3. Myelda.	Myelta.	"	"	Myel-payi

} ut
supra.

N. B.—This nearly agrees with XI. only that the root having a final consonant, the preterite "t" is not doubled. So are conjugated (I have found no other verbs of this conjugation).

* Uto and Sheöto, like Jikko elsewhere, are both neuter and transitive. See them under the respective heads. Kbíwo, to tremble is neuter; to quarrel is transitive. Bré-to, to cry out is neuter; Bré-to, to summon is active.

XIII.—Intransitives in “so.” Infinitive, Nís-cho, to sit. Imperative, Niso, sit down.

<i>Indicative active, sing. number.</i>		<i>Indicative passive, sing. number.</i>		<i>Causal</i>
<i>Present.</i>	<i>Preterite.</i>	<i>Present.</i>	<i>Preterite.</i>	<i>Imperative.</i>
1. Nísi-gna.	Ní-s-ti.	”	”	Nísi-pato
2. Ní-se.	Ní-s-te.	”	”	Nísi-paso
3. Ní-se.	Ní-s-ta.	”	”	Nísi-payi

} ut
supra.

This conjugation interposes its reflex sign or “s,” between the root and the ordinary intransitive conjugational forms. Nearly all transitives can be conjugated in this form as a middle voice. But it has also many primitives as will be seen by the instances given. So also are conjugated Wáso cacare. Chároso mingere. Píso crepitum facere. Náso, to take rest. Chyéonso or Chayinso, to learn. Khleuso, to lie hid. Syínso or Shayínso, to wake. Sáso, to kill one's self. Teumso, to beat one's self. Bamso, to scratch one's self. Ríso, to laugh. Gléso, to lie down. Chíso, to bathe. Phíso, to dress. Chaniso, to play. Prénso, to begin.

CONJUGATION OF BAHING VERBS.

I.—Paradigm of verbs transitive in “wo.”

Root Já, to eat. Imperative já-wo.

ACTIVE VOICE.

Imperative Mood.

<i>1. Singular of Agent.</i>	<i>1. Dual of Agent.</i>	<i>1. Plural of Agent.</i>
Já-wo, eat it.	Já-se, ye two eat it.	Já-ne, ye all eat it.
<i>2. Dual of Object.</i>	<i>2. Dual of Object.</i>	<i>2. Dual of Object.</i>
Já-wosi, eat them two.	Já-sesi, ye two eat them two.	Já-nési, ye all eat them two.
<i>3. Plural of Object.</i>	<i>3. Plural of Object.</i>	<i>3. Plural of Object.</i>
Já-womi, eat them all.	Jásemi, ye two eat them all.	Jánémi, ye all eat them all.

Negative Form.

By má prefixed Má já wo, &c. and so in all the subsequent moods.

INDICATIVE MOOD.

Present and Future Tenses.

<i>Singular of Agent.</i>	<i>Dual of Agent.</i>	<i>Plural of Agent.</i>
<i>First Person.</i>		
1. { Já-gna, I eat or will eat it.	1. { Já-sa, inclusive. Ja-suku, exclusive. We two eat it,	1. { Já-ya, inclusive. Já-ka, exclusive. We all eat it.

Dual of Object.

2. { **Ja-gna-si,**
I eat them two.

Plural of Object.

3. { **Ja-gna-mi,**
I eat them all.

Dual of Object.

2. { **Ja-sa-si, inclusive,**
Ja-sukusi, exclusive,
We two eat them two.

Plural of Object.

3. { **Ja-sa-mi, inclusive,**
Ja-suku-mi, excl.
We two eat them all.

Second Person.

1. **Já-(y) í.**
2. **Já-(y)-i-si.**
3. **Já (y)-i-mi.**

1. **Já-si.**
2. **Já-si-si.**
3. **Já-si-mi.**

Third Person.

1. **Ja-wa.**
2. **Já-wa-si.**
3. **Já-wa-mi.**

1. **Já-se.**
2. **Já-se-si.**
3. **Já-se-mi.**

Dual of Object.

2. { **Já-ya-si, inclusive.**
Já-ka-si, exclusive.
We all eat them two.

Plural of Object.

3. { **Ja-yami, incl.**
Ja-ka-mi, excl.
We all eat them all.*

1. **Ja-ni.**
2. **Já-ni-si.**
3. **Já-ni-mi.**

*Preterite Tense.**First Person.*

1. **Já-tong.**

1. { **Já-tá-sá, incl.**
Já-tá-súku, excl.†

2. **Já-t-óng-si.**

2. { **Já-tá-sá-si, incl.**
Já-tá-súkú-si, excl.

3. **Já-t-óng-mi.**

3. { **Já-tá-sá-mi, incl.**
Já-tá-sú-kú-mi, excl.

1. { **Ján-tá-yo, incl.**
Ják-tá-ko, excl.

2. { **Ján-tá-yo-si, incl.**
Ják-tá-kó-si, excl.

3. { **Ján-tá-yó-mi, incl.**
Ják-tá-kó-mi, excl.

N. B.—The intercalated n and k are devious. See on.

Second Person.

1. **Jáp-t-eu.**
2. **Jáp-t-eu-si.**
3. **Jáp-t-eu-mi.**

1. **Já-tá-si.**
2. **Já-tá-si-si.**
3. **Já-tá-si-mi.**

1. **Ján-tá-ni.**
2. **Ján-tá-ni-si.**
3. **Ján-tá-ni-mi.**

N. B.—The intercalated p and n are devious.

Third Person.

1. **Jáp-t-a.**
2. **Jáp-t-asi.**
3. **Jáp-t-a-mi.**

1. **Já-ta-se.**
2. **Já-ta-se-si.**
3. **Já-ta-se-mi.**

1. **Jám-ta-me.**
2. **Jám-ta-me-si.**
3. **Jám-ta-me-mi.**

N. B.—The intercalated p and m are devious.

* The form of the conjugation in the remaining persons of the indicative mood being the same as in the first person (and also in the imperative) it is needless to load the paper with repetitions of the names of the numbers, agentive and objective, or with the English equivalents.

† Observe that the separation of the syllables is merely to facilitate the student's comprehension, and that I shall do so no further, for the genius of the language is averse to any such treatment of its finely blended elements.

Infinitive Mood.

Já-cho, to eat or to have eaten, aoristic.

Participles.

(Take notice that all the participles are essentially relative and that they correspond as to sense with nouns, substantival or adjectival ad libitum.)

1ST. PARTICIPLE OF THE AGENT.

Impersonal Form.

Já-ba, the eater, who eats, or ate, or will eat; aoristic.

N. B.—This participle has no impersonated equivalent.

2ND. PARTICIPLE OF THE OBJECT AND OF THE INSTRUMENT ALSO EXPRESSIVE OF HABIT AND OF FITNESS.

*Present and future time.**Impersonal form.*

Jácho-me, eatable, what is usually eaten or is fit to eat (to be eaten) what or whom any one eats or will eat (food), and what he eats or will eat with (teeth).

3RD. PARTICIPLE OF THE OBJECT AND OF THE INSTRUMENT.

*Past time.**Impersonal form.*

Já-na, eaten, what or wherewith any one ate (also what has been eaten).

4TH. PERSONATED EQUIVALENT OF 2ND PARTICIPLE, SUPRA.

*First person.**Singular of Agent.*

1. Ja-gname, the one that I eat.

Dual of Object.

2. Jagnasime, the two that I eat.

Plural of Object.

3. Jagnamime, the all that I eat.

Dual of Agent.

1. { Jasame,
Jasukume,
the one that we
two eat.

Dual of Object.

2. { Jajasime,
Jasukusime,
the two that we
two eat.

Plural of Object.

3. { Jajamime,
Jasukumime,
the all that we
two eat.

Second person.

1. Jayime.
2. Jayisime.
3. Jayimime.

1. Jasime.
2. Jasisime.
3. Jasimime.

Third person.

1. Jawame.
2. Jawasime.
3. Jawamime.

1. Jaseme.
2. Jasesime.
3. Jasemime.

Plural of Agent.

1. { Jayame,
Jakame,
the one that we
all eat.

Dual of Object.

2. { Jajasime,
Jakasime,
the two that we
all eat.

Plural of Object.

3. { Jajamime,
Jakamime,
the all that we
all eat.

1. Janime.
2. Janisime.
3. Janimime.

1. Jameme.
2. Jamesime.
3. Jamemime.

These (2nd and 3rd person) of course mean respectively what or wherewith thou and he (or she) eats or will eat, &c. see note to 1st person of indicative mood.

5TH. IMPERSONATED EQUIVALENT OF 3RD PARTICIPLE, SUPRA.

First Person.

- | | | |
|--|-----------------------------------|-----------------------------------|
| 1. Já tongme, (the one
that I ate.) | 1. { Játasame.
Játasukume. | 1. { Jántayome.
Jáktakome. |
| 2. Játongsime. | 2. { Játasasime.
Játasukusime. | 2. { Jántayosime.
Jáktakosime. |
| 3. Játongmime. | 3. { Játasamime.
Játasukumime. | 3. { Jántayomime.
Jáktakomime. |

Second Person.

- | | | |
|----------------|----------------|-----------------|
| 1. Jápteume. | 1. Játasime. | 1. Jántanime. |
| 2. Jápteusime. | 2. Játasisime. | 2. Jántanisime. |
| 3. Jápteumime. | 3. Játasimime. | 3. Jántanimime. |

Third Person.

- | | | |
|---------------|----------------|------------------|
| 1. Jáptame. | 1. Játaseme. | 1. Jámтамeme. |
| 2. Jáptasime. | 2. Játasesime. | 2. Jámтasesime. |
| 3. Jáptamime. | 3. Játasemime. | 3. Jántanimime.* |

GERUNDS.

Gerund of the present and future time, impersonal.

There is none.

Gerund of present and future time personated.

1ST.—WITH MAIN VERB IN PRESENT OR FUTURE TIME.

First person.

- | <i>Singular of Agent.</i> | <i>Dual of Agent.</i> | <i>Plural of Agent.</i> |
|---|--|---|
| 1. Jaguana, I eating it,
shall do so and so. | 1. { Jasana, exclusive.
Jasukuna, incl. | 1. { Jayana, incl.
Jakana, excl. |
| <i>Dual of Object.</i> | <i>Dual of Object.</i> | <i>Dual of Object.</i> |
| 2. Jagnasina. | 2. { Jajasina, incl.
Jasakusina, excl. | 2. { Jayasina, incl.
Jakasina, excl. |
| <i>Plural of Object.</i> | <i>Plural of Object.</i> | <i>Plural of Object.</i> |
| 3. Jagnamina. | 3. { Jajamina, incl.
Jasukumina, excl. | 3. { Jayamina, incl.
Jakamina, excl. |

Second person.

- | | | |
|--------------|--------------|--------------|
| 1. Jayina. | 1. Jasina. | 1. Janina. |
| 2. Jayisina. | 2. Jasisina. | 2. Janisina. |
| 3. Jayimina. | 3. Jasinina. | 3. Jauimina. |

Third person.

- | | | |
|--------------|--------------|--------------|
| 1. Jawana. | 1. Jasena. | 1. Jamena. |
| 2. Jawasina. | 2. Jasesina. | 2. Jamesina. |
| 3. Jawamina. | 3. Jasemina. | 3. Jamemina. |

* The above forms of the participle and gerund add merely the respective formative particles to the several tense forms; being "me" for the participle and "na" for the gerund.

2ND.—SAME GERUND, PERSONATED WITH MAIN VERB IN
PRETERITE.

First person.

- | | | |
|--|--|---|
| 1. Jatongna, (I eating it, did so and so). | 1. { Jatasana, inclusive.
Jatasukuna, excl. | 1. { Jantayóna, incl.
Jaktakóna, excl. |
| 2. Jatongsina. | 2. { Jatasasina, incl.
Jatasukusina, excl. | 2. { Jantayósina, incl.
Jaktakósina, excl. |
| 3. Jatongmina. | 3. { Jatasamina, incl.
Jatasukumina, excl. | 3. { Jantayómína, incl.
Jaktakómína, excl. |

Second person.

- | | | |
|----------------|----------------|-----------------|
| 1. Japteuna. | 1. Jatasina. | 1. Jantanina. |
| 2. Japteusina. | 2. Jatasisina. | 2. Jantanisina. |
| 3. Japteumina. | 3. Jatasimina. | 3. Jantanimina. |

Third person.

- | | | |
|---------------|----------------|------------------|
| 1. Japtana. | 1. Jatasena. | 1. Jamtamena. |
| 2. Japtasina. | 2. Jatasesina. | 2. Jamtamesina. |
| 3. Japtamina. | 3. Jatasemina. | 3. Jamtamemina.* |

Gerund of past time, impersonal Jáso, and Jásomami.†

Same Gerund, personated.

1ST.—WITH MAIN VERB IN PRESENT OR FUTURE.

First person.

- | <i>Singular of Agent.</i> | <i>Dual of Agent.</i> | <i>Plural of Agent.</i> |
|---|---|---|
| 1. Jagnako, (I having ate it, will do so and so). | 1. { Jasako, incl.
Jasukuko, excl. | 1. { Jayako, incl.
Jakako, excl. |
| <i>Dual of Object.</i> | <i>Dual of Object.</i> | <i>Dual of Object.</i> |
| 2. Jagnasiko. | 2. { Jisasiko, incl.
Jasikusiko, excl. | 2. { Jayasiko, incl.
Jakasiko, excl. |
| <i>Plural of Object.</i> | <i>Plural of Object.</i> | <i>Plural of Object.</i> |
| 3. Jagnamiko. | 3. { Jisamiko, incl.
Jasukumiko, excl. | 3. { Jayamiko, incl.
Jakamiko, excl. |

Second person.

- | | | |
|--------------|--------------|--------------|
| 1. Jayiko. | 1. Jasiko. | 1. Janiko. |
| 2. Jayisiko. | 2. Jasisiko. | 2. Janisiko. |
| 3. Jayimiko. | 3. Jasimiko. | 3. Janimiko. |

Third person.

- | | | |
|--------------|--------------|--------------|
| 1. Jawako. | 1. Jaseko. | 1. Jameko. |
| 2. Jawasiko. | 2. Jasesiko. | 2. Jamesiko. |
| 3. Jawamiko. | 3. Jasemiko. | 3. Jamemiko. |

* The above forms of the participle and gerund add merely the respective formative particles to the several tense forms; being "me" for the participle and "na" for the gerund.

† See remark in the sequel on Jásoño with the auxiliary.

2ND.—THE SAME GERUND WITH THE MAIN VEBB IN THE
PRETERITE.

First person.

- | | | |
|---|---|---|
| 1. Jatangko, (I having
ate it did so and so. | 1. { Jatasako, incl.
Jatasukuko, excl. | 1. { Jantayoko, incl.
Jaktakoko, excl. |
| 2. Jatongsiko. | 2. { Jatasasiko, incl.
Jatasukusiko, excl. | 2. { Jantayosiko, incl.
Jaktakosiko, excl. |
| 3. Jatongmiko. | 3. { Jatasamiko, incl.
Jatasukumiko, excl. | 3. { Jantayomiko, incl.
Jaktakomiko, excl. |

Second person.

- | | | |
|----------------|----------------|-----------------|
| 1. Japteuko. | 1. Jatasiko. | 1. Jantaniko. |
| 2. Japteusiko. | 2. Jatasisiko. | 2. Jantanisiko. |
| 3. Japteuniko. | 3. Jatasimiko. | 3. Jantanimiko. |

Third person.

- | | | |
|---------------|----------------|------------------|
| 1. Japtako. | 1. Jataseko. | 1. Jamtameko. |
| 2. Japtasiko. | 2. Jatasisiko. | 2. Jamtamesiko. |
| 3. Japtamiko. | 3. Jatasemiko. | 3. Jamtamemiko.* |

Reflex transitive, or middle voice† of the transitive verb to eat.

IMPERATIVE MOOD.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jáso, eat thyself.	{ Jás-che, ye two eat yourselves.	{ Jásine,‡ ye all eat your- selves.

* Here as before, the gerundial impersonated forms are constructed by merely adding the past gerund sign or "ko" to the several forms of the tenses; and as in the indicative mood, there are 33 personal forms proper to either time (present or future and preterite) so there are 66 forms of the gerund of past time and in like manner are there 66 of the gerund of present time; and so also of the participles, not to add the three impersonate forms of the latter, making with them 69! This is a more than Manchuric luxuriance of participial and gerundial growth. I have now gone through the most essential and characteristic forms of the verb, and shall reserve the less essential or the several other so called moods &c. for the sequel, proceeding first to the reflex or middle voice and then to the passive upon the present model. The gerunds are purely verbal with no touch of the noun, and they are essentially continuative, serving in lieu of the conjunction "and."

† There are a great many primitives or neuters in "so," besides the derivatives or reflex forms of the transitives which I call their middle voice. All transitives make their middle voice by changing their appropriate sign into "so." This form is perfectly uniform for all primitives and derivatives. The French amuser and s'amuser, = cham-cho and cham-s-cho give a good idea of it.

‡ There are of course no objective forms of an intransitive verb, and all verbs in "so," whether primitively neuter or derived, as here from transitives, are so regarded. See and compare the transitive forms in the active voice aforegone.

INDICATIVE MOOD.

*Present and Future Tense.**First person.*

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jásigna.	Jás-cha, incl. Jás-chuku, excl.	Jásiya, incl. Jásika, excl.

Second person.

Jáse.	Jás-chi.	Jásini.
-------	----------	---------

Third person.

Jase.	Jás-che.	Jásime.
-------	----------	---------

PRETERITE TENSE.

First person.

Jasti.	{ Jastasa, incl. Jastasuku, excl.	{ Jastayo, incl. Jastako, excl.
--------	--------------------------------------	------------------------------------

Second person.

Jaste.	Jastasi.	Jastani.
--------	----------	----------

Third person.

Jasta.	Jastasa.	Jastame.
--------	----------	----------

INFINITIVE MOOD.

Jascho, to eat, or to have eaten one's self, aoristic.

Participles.

1ST.—PARTICIPLE OF THE AGENT, IMPERSONAL.

Jásiba, the self-eater, one who eats, or will eat or ate himself, aoristic.

2ND.—PARTICIPLE OF THE OBJECT AND INSTRUMENT.

*Present and Future Time.**Impersonal Form.*

Jaschome, his own that any one eats or will eat, self eatable, what is self eaten or wherewith to eat self.

3RD.—SAME PARTICIPLE OF TIME PAST, IMPERSONAL.

Jasina, his own (flesh) that any one ate, or what has been selfeaten by any one; and wherewith it has been self eaten* or his own (teeth) wherewith any one ate.

4TH.—IMPERSONATED EQUIVALENT OF PARTICIPLE 2ND IN CHOME.

First person.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jasiname, my own that I eat or eat with.	{ Jaschame, incl. Jaschukume, excl.	{ Jasiyame, incl. Jasikame, excl.

* The participles in cho-me and in na are scarcely useable in derivative verbs in "so" like Jaso, but more freely in primitives of the same formation such as wáso = caco, e. g., was-chome khli voidable ordure, and wásina khli = voided ordure, that is, the ordure which will be and has been, voided. This shows the passive bent of these participles and the affinity of neuter verbs to passives. See Classification of Verbs.

Second person.

Jaseme.

Jaschime.

Jasinime.

Third person.

Jaseme.

Jascheme.

Jasimeme.

5TH.—IMPERSONATED EQUIVALENT OF PARTICIPLE 3RD IN "NA."

*Singular.**Dual.**Plural.**First person.*Jastime, my own that
I ate.{ Jastasame, incl.
Jastasukume, excl.{ Jastayome, incl.
Jastakome, excl.*Second person.*

Jasteme.

Jastasime.

Jastanime.

Third person.

Jastame.

Jastaseme.

Jastameme.

GERUNDS.

Gerund of present and future time, impersonal.

There is none.

Gerund of present and future time, personated.

1ST.—WITH MAIN VERB IN SAME TIME.

*Singular.**Dual.**Plural.**First person.*Jasignana, (I eating my
own flesh shall do so)
and so).{ Jaschana, incl.
Jaschukuna, excl.{ Jasiyana, incl.
Jasikana, excl.*Second person.*

Jasena.

Jaschina.

Jasinina.

Third person.

Jasena.

Jaschena.

Jasimena.

2ND.—SAME GERUND PERSONATED WITH MAIN VERB IN

PAST TENSE.

*First person.*Jastina, (I eating my
own flesh did so and so.){ Jastasana, incl.
Jastasukuna, excl.{ Jastayona, incl.
Jastakona, excl.*Second person.*

Jastena.

Jastasina.

Jastanina.

Third person.

Jastana.

Jastasena.

Jastamena.

Gerund of past time, impersonal.

There is none.

Same gerund personated.

1ST.—WITH MAIN VERB IN PRESENT OR FUTURE.

*First person.*Jasiguako, (I having
eaten my own flesh
shall do so and so.){ Jaschako, incl.
Jaschukuko, excl.{ Jasiyako, incl.
Jasikako, excl.

Second person.

Jaseko.

Jaschiko.

Jasiniko.

Third person.

Jaseko.

Jascheko.

Jasimeko.

2ND.—SAME GERUND WITH MAIN VERB IN THE PRETERITE.

*Singular.**Dual.**Plural.**First person.*Jastiko, (I having eaten
my own did so and
so).

{	Jastasako, incl.
	Jastasukuko, excl.

{	Jastayoko, incl.
	Jastakoko, excl.

Second person.

Jasteko.

Jastasiko.

Jastaniko.

Third person.

Jastako.

Jastaseko.

Jastameko.

Passive voice of the same verb.

(Basis, Jayi = eat me).

IMPERATIVE MOOD.

*Singular of Object.**Dual of Object.**Plural of Object.*

1. Jáyi, eat me thou.

1. Jásiki, eat us two thou.

1. Jáki, eat us all thou.

*Dual of Agent.**Dual of Agent.**Dual of Agent.*2. Jáyisi, eat me ye
two.2. { Jásikisi, eat us two
ye two.2. { Jákisi, eat us all ye
two.*Plural of Agent.**Plural of Agent.**Plural of Agent.*

3. Jáyini, eat me ye all.

3. { Jásikini, eat us two
ye all.3. { Jákini, eat us all ye
all.*

INDICATIVE MOOD.

*Present and Future Tense.**First person.**Singular of Object.**Dual of Object.**Plural of Object.*1. Jáyí, eats me he, =
I am eaten by him.

1. {	Jáso, incl.
	Jásiki, excl.
	We two are eaten by him.

1. {	Jáso, incl.
	Jáki, excl.
	We all are eaten by him.

* Observe that of the active voice of the transitive the object is him or her or it; of the middle voice the object is self; and of the passive the object is me, but that the order of arrangement of agent and object is reversed in the passive as compared with the active voice and so also in the indicative mood. This is done in conformity to the genius of this language which requires the attention to be primarily fixed on the agent in one voice, on the object in the other. It will be seen in the sequel that there are further special forms of the verb to denote the action which passes from me to thee and from thee to me. These are necessary complements of the passive voice in a language which makes the mention of agents and patients inseparable from that of the action.

Dual of Agent.

2. Jayisi, I am eaten by them two.

Plural of Agent.

3. Jayimi, I am eaten by them all.

Dual of Agent.

2. { Jasosi, incl.
Jasikisi, excl.
We two are eaten by them two.

Plural of Agent.

3. { Jasomi, incl.
Jasikimi, excl.
We two are eaten by them all.

Dual of Agent.

2. { Jasosi,
Jakisi,
We all are eaten by them two.

Plural of Agent.

3. { Jasomi, incl.
Jakimi, excl.
We all are eaten by them all.

N. B.—The agent is always of the 3rd person, he, she, or it; if it be 2nd person the conjugation is another.

Second person.

1. Jaye.
2. Jayesi.
3. Jayemi.

1. Jasi.
2. Jasisi.
3. Jasimi.

1. Jani.
2. Janisi.
3. Janimi.

Third person.

1. Jawa.
2. Jase.
3. Jame.

1. Jawasi.
2. Jasesi.
3. Jamesi.

1. Jawami.
2. Jasemi.
3. Jamemi.

*Preterite Tense.**First person.*

1. Jati.

1. { Jataso, incl.
Jatasiki, excl.

1. { Jataso, incl.
Jáktaki, excl.

2. Jatisi.

2. { Jatasosi, incl.
Jatasikisi, excl.

2. { Jatasosi.
Jáktakisi.

3. Jatimi.

3. { Jatasomi, incl.
Jatasikimi, excl.

3. { Jatasomi.
Jáktakimi.

Second person.

1. Jate.
2. Jatesi.
3. Jatemi.

1. Jatasi.
2. Jatasisi.
3. Jatasimi.

1. Jantani.
2. Jantanisi.
3. Jantanimi.

Third person.

1. Japta.
2. Jatase.
3. Jamtame.

1. Japtasi.
2. Jatasesi.
3. Jamtamesi.

1. Japtami.
2. Jatasemi.
3. Jamtamemi.

INFINITIVE MOOD.

There is none properly so called.

The sense is conveyed by placing the separate pronoun in the objective case before the verb in the active voice. *Gó jácho*, = to eat me, = to be eaten.

PARTICIPLES.

1st.—Participle of the agent in “ba” is of course wanting.

2nd.—Participle of the object in “chome” is rather passive than active though used in both voices, as we say in English what (or whom) any one eats or is wout to eat or what is wout to be eaten by any one.

3rd.—Participle in “na,” is yet more purely passive, Já-na, what has been eaten. But it is used with more than English license as though it belonged to the active voice, what any one hath eaten.

4th.—Personated equivalent of the 2nd of the above. It is formed by adding the formative suffix “me” to the several tense forms of the indicative present and future of this voice, e. g.

*Singular of Agent.**Dual of Agent.**Plural of Agent.*

1. Jayime.

1. { Jásome, incl.
Jasikime, excl.1. { Jásome, incl.
Jákime, excl.

and so on through the whole of the thirty-three forms above given in the indicative.

5th.—Personated equivalent of the 3rd of the above participles or that in “na.” It is formed as above by adding the formative “me” to the several forms of the preterite indicative of this voice, e. g.

1. Jatime.

1. { Jatasome, incl.
Jatasikime, excl.1. { Jatasome, incl.
Jatakime, excl.

and so on through all the 33 forms of the three persons of the preterite passive. Jayime means I who am the eaten of him, and Jatime, I who was the eaten of him, and so of all the rest.

N. B.—The impersonal forms in this, and of the active and middle voices are declinable like nouns. The personated in “me” which take so much of the verb character are indeclinable. Both are thoroughly and intrinsically relative in sense.

Gerunds.

Gerund of future and present time, impersonal.

There is none.

The same gerund personated.

1st.—With the main verb in same time.

It is formed by the addition of the appropriate formative or “na” to the several forms of the present and future indicative of this voice, e. g.

*Singular.**Dual.**Plural.*

1. Jáyina.

1. { Jasona, incl.
Jasikina, excl.1. { Jasona, incl.
Jakina, excl.

and so on through all the 33 forms of the three persons of the indicative.

2nd.—The same gerund personated with the main verb in the preterite.

It is formed by suffixing the “na” to the preterite indicative forms, e. g.

*Singular.**Dual.**Plural.*

1. Jatina.

1. { Jatasona, incl.
Jatasikina, excl.1. { Jatasona, incl.
Jatakina, excl.

Samples of the sense. Being eaten I shall cry out, Jáyina bréna: being eaten I cried out, Játina bréti.*

* Observe that the root bré, to cry out, is here conjugated as an intransitive. Elsewhere I have given the same root conjugated as a transitive in the sense of to summon. The infinitive and imperative (bre-cho, bre-to) are identical. This double indicative conjugation from the same root of words having nearly identical senses is very common, as úto, to fall and to fell, Jikko to be broken, and to break, &c. Bréto, the intransitive, is conjugated like guito, to be afraid, the type of regular intransitives in “to.”

Gerund of past time, impersonal.

There is none.

Same gerund personated.

1st.—With main verb in present or future.

It is formed by adding the formative “ko” to the several forms (33) of the indicative present and future, e. g.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
1. Jayiko.	1. { Jásoko, incl. Jásikiko, excl.	1. { Jásoko, incl. Jákiko, excl.

2nd.—Same gerund with the main verb in the preterite.

It is formed as above by adding “ko” to the several forms of the indicative preterite, e. g.

1. Jatiko.	1. { Jatasoko, incl. Jatasikiko, excl.	1. { Jatasoko, incl. Jatakiko, excl.
------------	---	---

and so on through all the 33 forms of the indicative preterite of this voice. The senses respectively of Jayiko and Jatiko are, having been eaten I shall be, and, having been eaten, I was or have been, (forgotten); and so of the rest.

Paradigm of certain special forms of conjugation supplementary of the passive and denoting

1st, the action that passes between me as the agent and thee as the patient.
2nd, that in which thou art the agent and I the patient. The first of these forms is very distinct, but is confined to the indicative (and subjunctive) mood.

It has no imperative or infinitive. The second runs much into the ordinary passive and has an imperative. See on.

1st form, I—thee.

(Verb Já, to eat, as before).

INDICATIVE MOOD.

Present and Future Tense.

<i>Singular of Agent.*</i>	<i>Dual of Agent.</i>	<i>Plural of Agent.</i>
1. Jáná, I eat thee or thou art eaten by me.	Jáyesi. We two eat thee.	Jáyemi. We all eat thee.
<i>Dual of Object.</i>	<i>Dual of Object.</i>	<i>Dual of Object.</i>
2. Jánási, I eat you two.	{ Jásisi. We two eat you two.	{ Jásimi. We all eat you two.
<i>Plural of Object.</i>	<i>Plural of Object.</i>	<i>Plural of Object.</i>
3. Jánáni, I eat you all.	{ Jánisi. We two eat you all.	{ Jánimi. We all eat you all.

* This form is rather allied to the passive than active, and may be called the supplement of the former, which is very incomplete and alien to the genius of the tongue, being cramped at the threshold by taking the 1st person objective for its starting point, thus, jayi = eat me. There is no Be thou eaten. And here jana, and its participial janne look to the object chiefly, thou art eaten by me and thou who art the eaten of me.

Preterite Tense.

- | | | | |
|--|---|-------------------------------------|-------------------------------------|
| 1. Jantana, I ate thee, or,
thou wast eaten by
me. | } | Játesi. We two ate thee. | Játemi. We all ate thee. |
| 2. Jántanasi, I ate you
two. | | { Játasisi. We two ate you
two. | { Játasimi. We all ate you
two. |
| 3. Jantanani, I ate you
all. | | { Jántanisi. We two ate you
all. | { Jántanimi. We all ate you
all. |

Participles.

There are none of the impersonal form.

Participle of the future personated.

It is formed, as in the ordinary conjugation, by adding the appropriate particle or "me" to the forms of the indicative, e. g.

*Singular.**Dual.**Plural.*

Janame.

Jayesime.

Jayemime.*

and so on through all the 9 forms above given in the indicative present.

Participle of the past personated. It is formed from the preterite by adding the "me," e. g.

Jantaname.

Jatesime.

Jatemime,

and so on through the above 9 forms of the preterite.

The sense of Jánáme is, thou who art the eaten of me; of jantaname, thou who wert the eaten of me, and so of all the rest.

Gerunds.

There are none whatever impersonated.

The personated forms are, as in the ordinary conjugation, four, two of the present and two of the past, and they are constructed, as before, by adding, respectively "na" and "ko" to the tense forms above, e. g.

Gerund of the future and present with the main verb in same time.

*Singular.**Dual.**Plural.*

Janana.

Jayesina.

Jayemina,

and so on through all the 9 forms of the tense.

Same gerund with the main verb in the preterite.

*Singular.**Dual.**Plural.*

Jantanana.

Jatesina.

Jatamina,

and so on through all the 9 forms above.

Gerund of the preterite with main verb in the past time.

*Singular.**Dual.**Plural.*

Jantanako.†

Jatesiko.

Jatemiko,

and so on through the 9 tense forms.

* The "y" is merely to keep the vowels apart.

† Samples of the above gerunds. Eating thee I shall fill my belly, jánana rúgna: Eating thee I filled my belly, jantana rúti: Having eaten thee I will go, janako lágna: Having eaten thee I slept, jántanako ipti: We all having eaten thee, were pleased, jatemiko gyérstako: We two, having eaten thee, will flee, jayesiko juksukasuku: We all, eating thee, fled, jatamina júkkatako.

2nd.—Special form, Thou—me.

IMPERATIVE MOOD.

<i>Singular of Agent.</i>	<i>Dual of Agent.</i>	<i>Plural of Agent.</i>
1. Jáyi,* Eat me thou or let me be eaten by thee.	1. Jáyísi.	1. Jáyini.
<i>Dual of Object.</i>	<i>Dual of Object.</i>	<i>Dual of Object.</i>
2. Jasiki.	2. Jasikisi.	2. Jasikini.
<i>Plural of Object.</i>	<i>Plural of Object.</i>	<i>Plural of Object.</i>
3. Jaki.	3. Jakisi.	3. Jakini.

N. B.—This tallies with the ordinary passive as will be seen by reading the vertical columns of the one with the horizontal of the other.

INDICATIVE MOOD.

Present and Future Tense.

1. Jáyi, (Thou eatest me, or I am eaten by thee.)	1. Jayisi.	1. Jayini.
2. Jásiki.	2. Jasikisi.	2. Jasikini.
3. Jáki.	3. Jakisi.	3. Jakini.

Preterite.

1. Jati.	1. Jatasi.	1. Jatini.
2. Jatasiki.	2. Jatasikisi.	2. Jatasikini.
3. Jaktaki.	3. Jaktakisi.	3. Jaktakini.

N. B.—These agree respectively with the present and preterite of the passive save 1st, that there are here no inclusive forms, and 2nd, that the personal sign *ni* stands here in place of the passive *mi*.

INFINITIVE MOOD.

Wanting: the ordinary infinitive is used with the separate pronouns in the instrumental and objective cases, *gami go jácho*.

PARTICIPLES.

There are none of the impersonated kind.

The personated are formed, as usual, by the “me” suffix added to the tense forms, e. g.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jayime.	Jayisime.	Jayinime,
and so on through the 9 tense forms.		
<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jatime.	Jatisime..	Jatinime,
and so on through the 9 tense forms above.		

* This is the formula of the passive, because the passive only requires that the first person be the patient, allowing the 2nd or 3rd to be the agent, and hence the indicative of this form so nearly tallies with that of the passive, *jayi*, eat me he or thou, &c.

The senses of Jayime and Jatime are, I who am the eaten of thee, and I who was the eaten of thee. The sense would be equally expressed by thou who art my eater, but eater jába is purely active, and cannot be admitted into an agento-objective verb.

GERUNDS.

Unpersonated, there are none.

The personated of the present are formed as before by "na" suffixed to the several tense forms; and those of the past by "ko" similarly affixed; e. g. jáyina, játina, and jáyiko, jatiko, equivalent to thou eating me wilt do so and so, and did so and so; and thou having ate me wilt do, and did, so and so.

Paradigm of transitives in "to," not changing the "t" into "d."*

Root, bré, to summon.

ACTIVE VOICE.

Imperative Mood.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
1. Bréto.	1. Brétise.	1. Brétine.
<i>Dual of Object.</i>	<i>Dual of Object.</i>	<i>Dual of Object.</i>
2. Brétosi.	2. Brétisesi.	2. Brétinesi.
<i>Plural of Object.</i>	<i>Plural of Object.</i>	<i>Plural of Object.</i>
3. Brétomi.	3. Brétisemi.	3. Brétinemi.

INDICATIVE MOOD.

*Present and Future Tense.**First person.*

1. Brétú.	1. { Brétisa, incl. Brétisuku, excl.	1. { Brétiya, incl. Brétika, excl.
2. Brétusi.	2. { Brétisasi. Brétisukusi.	2. { Brétiyasi. Brétikasi.
3. Brétúmi.	3. { Brétisami. Brétisukumi.	3. { Brétiyami. Brétikami.

Second person.

1. Bréti.	1. Brétisi.	1. Brétini.
2. Brétisi.	2. Brétisisi.	2. Brétinisi.
3. Brétími.	3. Brétisimi.	3. Brétinimi.

Third person.

1. Bréta.	1. Brétise.	1. Brétíme.
2. Brétasi.	2. Brétisesi.	2. Brétimesi.
3. Brétami.	3. Brétisemi.	3. Brétímémi.

* Those that change the "t" of the imperative into "d" in the indicative, do not take the incremotive "ti" of the dual and plural present, nor the double t of the preterite, and they have í, not ti, in the passive. These peculiarities are in fact confined to the transitives in unchanging "to," but are partially shared by the changing transitives and by the neuters.—See classification of verbs.

*Preterite.**First person.*

- | | | |
|----------------|---|---|
| 1. Bréttong. | 1. { Bréttasa, incl.
Bréttasuku, excl. | 1. { Bréttayo, incl.
Brettako, excl. |
| 2. Bréttongsi. | 2. { Bréttasasi, incl.
Bréttasukusi, excl. | 2. { Bréttayosi, incl.
Bréttakosi, excl. |
| 3. Bréttongmi. | 3. { Bréttasami, incl.
Bréttasukumi, excl. | 3. { Bréttayomi, incl.
Bréttakomi, excl. |

Second person.

- | | | |
|---------------|----------------|----------------|
| 1. Brétteu. | 1. Bréttasi. | 1. Brettani. |
| 2. Bretteusi. | 2. Bréttasisi. | 2. Bréttanisi. |
| 3. Bretteumi. | 3. Bréttasimi. | 3. Brettanimi. |

Third person.

- | | | |
|--------------|----------------|----------------|
| 1. Brétta. | 1. Bréttase. | 1. Bréttame. |
| 2. Bréttasi. | 2. Bréttasesi. | 2. Bréttamesi. |
| 3. Bréttami. | 3. Bréttasemi. | 3. Bréttamemi. |

INFINITIVE MOOD.

Bré-cho, to call or to have called, &c.

PARTICIPLES.

1st, in ba, Bré-ba, who calls or called.

2nd, in chome, Bréchome, { whom any one calls or will call.
 { who will be called.

3rd, in na, Bré-na, { whom any one has called.
 { who has been called.

4th, in me, Brétume, &c. { whom I call, or shall call.
 { who will be called by me.

5th, in me, Bréttongme, &c. { whom I called.
 { who has been called by me.

Gerund of the past, impersonal, Bréso or Bresomami.

(None of the present).

Gerunds personated.

1st, in na, Brétuna, &c. I calling (will do so and so.)

2nd, in na, Bréttongna, &c. I calling (did so and so.)

3rd, in ko, Brétuko, &c. I having called (will do so and so.)

4th, in ko, Bréttongko, &c. I having called (did so and so.)

MIDDLE VOICE.

Breso, call thyself. Precisely like Jáso.

PASSIVE VOICE.

Imperative Mood.

- | | | |
|-------------|-----------------|---------------|
| 1. Bréti. | 1. Brétisiki. | 1. Brétiki. |
| 2. Brétisi. | 2. Brétisikisi. | 2. Brétikisi. |
| 3. Brétini. | 3. Brétisikini. | 3. Brétikini. |

*Indicative Present.**First person.*

- | | | |
|-------------|---|---|
| 1. Bréti. | 1. { Brétiso, incl.
Brétisiki, excl. | 1. { Brétiso, incl.
Brétiki, excl. |
| 2. Brétisi. | 2. { Brétisosi, incl.
Brétisikisi, excl. | 2. { Brétisosi, incl.
Brétikisi, excl. |
| 3. Brétimi. | 3. { Brétisomi, incl.
Brétisikimi, excl. | 3. { Brétisomi, incl.
Brétikimi, excl. |

Second person.

- | | | |
|-------------|---------------|---------------|
| 1. Bréte. | 1. Brétisi. | 1. Brétini. |
| 2. Brétesi. | 2. Brétisisi. | 2. Brétinisi. |
| 3. Brétemi. | 3. Brétisimi. | 3. Brétinimi. |

Third person.

- | | | |
|-------------|---------------|---------------|
| 1. Bréta. | 1. Brétasi. | 1. Brétami. |
| 2. Brétise. | 2. Brétisesi. | 2. Brétisemi. |
| 3. Brétime. | 3. Brétimesi. | 3. Brétimemi. |

*Preterite.**First person.*

- | | | |
|--------------|---|---|
| 1. Brétti. | 1. { Bréttaso, incl.
Bréttasiki, excl. | 1. { Bréttaso, incl.
Bréttaki, excl. |
| 2. Bréttisi. | 2. { Bréttasosi, incl.
Bréttasikisi, excl. | 2. { Bréttasosi, incl.
Bréttakisi, excl. |
| 3. Bréttimi. | 3. { Bréttasomi, incl.
Bréttasikimi, excl. | 3. { Bréttasomi, incl.
Bréttakimi, excl. |

Second person.

- | | | |
|--------------|----------------|----------------|
| 1. Brétte. | 1. Bréttasi. | 1. Bréttani. |
| 2. Bréttesi. | 2. Bréttasisi. | 2. Bréttanisi. |
| 3. Bréttemi. | 3. Bréttasimi. | 3. Bréttanimi. |

Third person.

- | | | |
|--------------|----------------|----------------|
| 1. Brétta. | 1. Brettasi. | 1. Brettami. |
| 2. Bréttase. | 2. Brettasesi. | 2. Brettasemi. |
| 3. Bréttame. | 3. Brettamesi. | 3. Brettamemi. |

INFINITIVE MOOD.

Brécho, precisely as in the last verb.

PARTICIPLES.

- 1st, in bá. Wanting, as in the last.
 2nd, in chome. Bréchome, precisely as in the last.
 3rd, in na. Bréna, ditto, ditto.
 4th, in me. Brétime &c. as before.
 5th, in me. Bréttime, &c. as before.

GERUNDS.

- | | | |
|-------------|-----------|------------------|
| 1st, in na. | Brétina, | } &c. as before. |
| 2nd, in na. | Bréttina, | |
| 3rd, in ko. | Brétiko, | |
| 4th, in ko. | Bréttiko, | |

SPECIAL FORM I.

Indicative present.

1. Brétina.	1. Brétesi.	1. Brétemi.
2. Brétinasi.	2. Brétisisi.	2. Brétisimi.
3. Brétinani.	3. Brétinisi.	3. Brétinimi.

Preterite.

1. Bréttana.	1. Bréttesi.	1. Bréttemi.
2. Bréttanasi.	2. Bréttasisi.	2. Bréttasimi.
3. Bréttanani.	3. Bréttanisi.	3. Bréttanimi.

INFINITIVE MOOD.

None. Gomi ga brécho, expresses the sense.

PARTICIPLES.

Impersonal none.

1st personated.	Brétiname, &c.
2nd ,,	Bréttaname, &c.

GERUNDS.

Impersonal none.

1st personated.	Brétinana, &c.
2nd ,,	Bréttanana, &c.
3rd ,,	Brétinako, &c.
4th ,,	Bréttanako, &c.

SPECIAL FORM II.

Imperative.

1. Bréti.	1. Brétisi.	1. Brétini.
2. Brétisiki.	2. Brétisikisi.	2. Brétisikini.
3. Brétiki.	3. Brétikisi.	3. Brétikini.

Indicative present.

1. Bréti.	1. Brétisi.	1. Brétini.
2. Brétisiki.	2. Brétisikisi.	2. Brétisikini.
3. Brétiki.	3. Brétikisi.	3. Brétikini.

Preterite.

1. Brétti.	1. Bréttisi.	1. Bréttini.
2. Bréttasiki.	2. Bréttasikisi.	2. Bréttasikini.
3. Bréttaki.	3. Bréttakisi.	3. Bréttakini.

INFINITIVE MOOD.

There is none. Gami gó brécho expresses the sense.

PARTICIPLES.

Impersonal none.

1st personated.	Brétime, &c.	} as before, by "me" added to the tense forms.
2nd ,,	Brétttime, &c.	

GERUNDS.

Impersonal of the past (none of present).

Bréso or Brésomami.

Ditto personated.

1st personated.	Bretina, &c.	} As before by "ná" added to the several forms of the tenses.
2nd ,,	Bréttina, &c.	
3rd ,,	Brétiko, &c.	
4th ,,	Bréttiko, &c.	

Paradigm of verbs intransitive or neuter.

Not having the silibant sign.

A neuter in "wo," Pi-wo, come thou.

IMPERATIVE MOOD.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Piwo.	Pise.	Pine.

INDICATIVE MOOD.

Present and Future Tenses.

<i>Singular.</i>	<i>First person.</i>	<i>Dual.</i>	<i>Plural.</i>
Pigna.	{ Pisa, incl. Pisuku, excl.		{ Piya, incl. Pika, excl.
	<i>Second person.</i>		
Piye.	Pisi.		Pini.
	<i>Third person.</i>		
Pi.	Pise.		Pime.

Preterite Tense.

<i>Singular</i>	<i>First person.</i>	<i>Dual.</i>	<i>Plural.</i>
Piti.	{ Pitasa, incl. Pitasuku, excl.		{ Pintayo, incl. Piktako, excl.
	<i>Second person.</i>		
Pite.	Pitasi.		Pintani.
	<i>Third person.</i>		
Pita.	Pitase.		Pimtame.

INFINITIVE MOOD.

Picho, to come or to have come, aoristic.

PARTICIPLES.

1st of the Agent, impersonal, aoristic.

Piha, who or what comes, or will come or came.

2nd of the object and instrument.

Future, impersonal.

Pichome. fit to come by (road), and fit for coming with (feet), and what any one will come by (road).

3rd the same, past time, impersonal.

Pina, what any one came by (road) and what he came with (feet).

Impersonated form of 2nd and 3rd.

It is formed by "me" added to the several forms of the tenses, pignáme, pitime, &c.*

GERUNDS.

That of present time.

Pígnana,† &c. with main verb in same time.

Pítina, &c. with main verb in preterite.

That of past time.

Pígnako, &c. with main verb in future.

Pítiko, &c. with main verb in past.

All intransitives not having "so" in the imperative are conjugated as above, except certain ones in "to," which I shall distinguish as neuters and which are conjugated as follows.

Paradigm of neuters in "to."

Root Bó, to flower. Imperative, Bó-to.

IMPERATIVE MOOD.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Bóto.	Bótise.	Bótime.

INDICATIVE MOOD.

Present and Future.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
	<i>First person.</i>	
Bótú.	{ Bótisa, incl. Bótisuku, excl.	{ Bótiya, incl. Bótika, excl.
	<i>Second person.</i>	
Bóti.	Bótisi.	Bótini.
	<i>Third person.</i>	
Bóta.	Bótise.	Bótime.
	<i>Preterite.</i>	
	<i>First person.</i>	
Bótti.	{ Bottasa, incl. Bóttasuku, excl.	{ Bóttayo, incl. Bóttako, excl.

* e. g. Pignáme kholi, the feet which I come with, Pignáme lam, the road which I come by. Pitime kholi, the feet which I came with; Pitime lam, the road which I came by.

† e. g. Pignana pagna = I will come and do it, literally I coming will do it.

Second person.

Bótte.

Bóttasi.

Bóttani.

Third person.

Bótta.

Bóttase.

Bóttame.

INFINITIVE MOOD.

Bó-cho.

Participle of the agent in "ba."

Bóba, what flowers, or will flower, or has flowered.

N. B.—The 2nd and 3rd participles in "chome" and "na" are wanting,* and so also their derivatives in "me."

GERUNDS.

1st. Bótuna.

Bótina.

Bótana, &c.

2nd. Bóttina.

Bottena.

Bóttana, &c.

3rd. Bótuko.

Bótiko.

Bótako, &c.

4th. Bóttiko.

Bótteko.

Bóttako, &c.

What, as opposed to the above, called neuters (see conjugation XI.) for distinction's sake, I have elsewhere called intransitives in "to," as Jító, Kháto, &c. (conjugation X.) are all regular and conjugated like the verb to come above given. In fact, all the so-called intransitives, whatever their sign, have one uniform conjugation, those in "so," merely interpolating the reflex sibilant, as may be seen by comparing the aforegone samples of both. But the neuters in "to," here ensampled by Bóto, are quite unique, leaning to the model of unchanging transitives with the same sign, for which see Bréto aforegone.

By comparing the above samples of complete conjugation with the summary view of the same subject which precedes it,† it will be seen that there is at bottom but one conjugation, because all transitives and intransitives follow the one general model with the material exception, however, of the singular indicative. Of that the various forms are therefore brought together in the classification of so-called conjugations; and it is only necessary to add that beyond the singular indicative of transitive verbs, there are no deviations from the one model of conjugating in the three voices. The whole force of conjugation is, it will be seen, thrown upon the actors, who do and suffer. Of the action itself there is little comparative heed, only two moods and two times being developed and the active and passive voices being perplexed. There are not in fact any inflexional or inherent verbal forms to express the various modifications of the action. Nevertheless these modifications, of course, have periphrastic means of expression, I shall call them moods, and now proceed to enumerate them.

* These participles can rarely be used with intransitive or neuter verbs, never with such of the latter as relate to the action of things. They imply an agent who produces that effect on a thing which these participles express relatively to future and past time respectively. Out of the vast number of intransitives enumerated elsewhere hardly a dozen make use of these participles. Some of these exceptions are bwakko, to speak, which gives bwangna ló,=spoken words. Bokko, to get up, whence bongua blocho, = bed, whence any one has risen: Niso, to sit, whence misina-khosingba, the chair on which any one has sat, &c.

† To wit, "Classification of Verbs."

SUBJUNCTIVE OR CONDITIONAL MOOD.

If, or should, I come.

*Indicative Present.**First person.*

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Pígna khedda.	{ Písa khedda, incl. Písuku khedda, excl.	{ Píya khedda, incl. Píka khedda, excl.

Second person.

Píye khedda.	Písi khedda.	Píni khedda.
--------------	--------------	--------------

Third person.

Pí khedda.	Píse khedda.	Píme khedda.
------------	--------------	--------------

*Preterite.**First person.*

Pígnáwa khedda.	{ Písawa khedda, incl. Písukuwa khedda, excl.	{ Píyawa khedda, incl. Píkawa khedda, excl.
-----------------	--	--

Second person.

Píyéwa khedda.	Písiwa khedda.	Píniwa khedda.
----------------	----------------	----------------

Third person.

Píwa khedda.	Písewa khedda.	Pímewa khedda.
--------------	----------------	----------------

The negative is formed, as usual, by má prefixed.

Another negative, allied if not equivalent, is impersonal and substitutes the particle theum for khedda, adding the separate pronouns personal in lieu of the pronominal suffixes of verhs.

Should I not come, &c.

*Present Tense.**First person.*

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Gó má pítheum.	{ Gósi má pítheum, incl. Gósuku má pítheum, excl.	{ Góyi má pítheum. Gókau má pítheum.

Second person.

Ga má pítheum.	Gasi má pítheum.	Gani má pítheum.
----------------	------------------	------------------

Third person.

Harem má pítheum.	Harem dausi má pítheum.	Harem dau má pítheum.
-------------------	-------------------------	-----------------------

The preterite of this is formed by adding the "wa" above gone to the correlative part of the sentence, as, had I not come, he would not have come, gó má pítheum, harem má píwa.

In the present or future it is, gó má pítheum, harem má pí = should I come not, he will not come. In both forms of the conditional, wá, added to the indicative, takes the place of the regular preterite piti, pite, pita.

CONTINGENT MOOD.

I may (perhaps) go.

It is expressed by the future in the alternative way, e. g. lágna má lágna, má teutu = I shall go, shall not go, I don't know = I may go, or perhaps I shall go, perhaps not, (root, lá, to go).

POTENTIAL MOOD.

It is formed by adding ne to the root of any main verb (e. g. lá to go) and then subjoining the several conjugational forms of the subsidiary verb to can, which is a regular transitive in "po." This, not having been given above, shall be fully set down here, though it differ not much, save euphonically, from the foregone samples of transitives, especially bréto.*

Root, chap, to can. Infinitive, chap-cho.

*Imperative.**Singular.*

1. Láne chappo.
2. Láne chapposi.
3. Láne chappomi.

Dual.

1. Láne chapse.
2. Láne chapsesi.
3. Láne chapsemi.

Plural.

1. Láne chamne.
2. Láne chamuesi.
3. Láne chamnemi.

*Indicative present.**First person.*

- | | | |
|------------------|---|---|
| 1. Láne ctabu. | 1. { Láne chapsa, incl.
Láne chapsuku, excl. | 1. { Láne chamya, incl.
Láne chapka, excl. |
| 2. Láne chabusi. | 2. { Láne chapasi, incl.
Láne chapsukusi, excl. | 2. { Láne chamyasi, incl.
Láne chapkasi, excl. |
| 3. Láne chabumi. | 3. { Láne chapsami, incl.
Láne chapsukumi, excl. | 3. { Láne chamyami, incl.
Láne chapkami, excl. |

Second person.

- | | | |
|------------------|-------------------|-------------------|
| 1. Láne chabi. | 1. Láne chapsi. | 1. Láne chamni. |
| 2. Láne chabisi. | 2. Láne chapsisi. | 2. Láne chamnisi. |
| 3. Láne chabimi. | 3. Láne chapsimi. | 3. Láne chamnimi. |

Third person.

- | | | |
|------------------|-------------------|-------------------|
| 1. Láne chabz. | 1. Láne chapse. | 1. Láne chamme. |
| 2. Láne chabasi. | 2. Láne chapsesi. | 2. Láne chamuesi. |
| 3. Láne chabami. | 3. Láne chapsemi. | 3. Láne chammemi. |

*Preterite.**First person.*

- | | | |
|---------------------|---|---|
| 1. Láne cbaptong. | 1. { Láne chaptasa, incl.
Láne chaptasuku, excl. | 1. { Láne chaptayo, incl.
Láne chaptako, excl. |
| 2. Láne cbaptongsi. | 2. { Láne chaptasasi, incl.
Láne chaptasukusi, excl. | 2. { Láne chaptayosi, incl.
Láne chaptakosi, excl. |
| 3. Láne cbaptongmi. | 3. { Láne chaptasami, incl.
Láne chaptasukumi, excl. | 3. { Láne chaptayomi, incl.
Láne chaptakomi, excl. |

* Compare chap-cho, chap-po, chab-u, chab-i, chab-a, chap-tong, cham-i with bré-cho, bré-to, brét-u, brét-i, brét-a, brét-tong, bré-ti; and observe in regard to the former that its radical p becomes b before a vowel and m before a nasal (n. m), but remains p before a sibilant or hard dental. It is so in all transitives in po, of all which chappo is a perfect sample.

Second person.

- | | | |
|--------------------|---------------------|----------------------|
| 1. Láne chapteu. | 1. Láne chaptasi. | 1. Láne chaptani. |
| 2. Láne chapteusi. | 2. Láne chaptasisi. | 2. Láne chaptanisi. |
| 3. Láne chapteumi. | 3. Láne chaptasemi. | 3. Láne chaptaniami. |

Third person.

- | | | |
|-------------------|---------------------|---------------------|
| 1. Láne chapta. | 1. Láne chaptase. | 1. Láne chaptame. |
| 2. Láne chaptasi. | 2. Láne chaptasesi. | 2. Láne chaptamesi. |
| 3. Láne chaptami. | 3. Láne chaptasemi. | 3. Láne chaptamemi. |

INFINITIVE.

Láne chapcho.

Participles.

- | | | |
|-----------------------------------|---|--|
| 1st in "ba," Láne chapba. | } | Impersonal as before. |
| 2nd in "chome," Láne chapchome. | | |
| 3rd in "na," Láne chamna. | | |
| 4th in "me," Láne chabume, &c. | } | Personated and formed by adding "me" to the tense forms. |
| 5th in "me," Láne chaptongme, &c. | | |

Gerunds.

- | | | |
|-----------------------------------|---|---|
| 1st in "na," Láne chabuna, &c. | } | Personated all and constructed as before by adding na, or ko, to the several tense forms. The impersonate past gerund is Láne chapso or chapsomami. |
| 2nd in "na," Láne chaptongna, &c. | | |
| 3rd in "ko," Láne chabuko, &c. | | |
| 4th in "ko," Láne chaptongko, &c. | | |

Middle Voice.

Lána chamso, and so on, precisely as in the verbs to eat and to summon.

PASSIVE VOICE.

Imperative Mood.

- | | | |
|-------------------|---------------------|-------------------|
| 1. Láne chamyi. | 1. Láne chapsiki. | 1. Láne chapki. |
| 2. Láne chamyisi. | 2. Láne chapsikisi. | 2. Láne chapkisi. |
| 3. Láne chamyini. | 3. Láne chapsikini. | 3. Láne chapkini. |

*Indicative present.**First person.*

- | | | |
|-------------------|---|---|
| 1. Láne chamyi. | 1. { Láne chapso, incl.
Láne chapsiki, excl. | 1. { Láne chapso, incl.
Láne chapki, excl. |
| 2. Láne chamyisi. | 2. { Láne chapsosi, incl.
Láne chapsikisi, excl. | 2. { Láne chapsosi, incl.
Láne chapkisi, excl. |
| 3. Láne chamyimi. | 3. { Láne chapsomi, incl.
Láne chapsikimi, excl. | 3. { Láne chapsomi, incl.
Láne chapkimi, excl. |

Second person.

- | | | |
|-------------------|-------------------|-------------------|
| 1. Láne chamyé. | 1. Láne chapsi. | 1. Láne chamni. |
| 2. Láne chamyési. | 2. Láne chapsisi. | 2. Láne chamnisi. |
| 3. Láne chamyémi. | 3. Láne chapsimi. | 3. Láne chamnimi. |

Third person.

- | | | |
|-----------------|-------------------|-------------------|
| 1. Láne chaba. | 1. Láne chabasi. | 1. Láne chabami. |
| 2. Láne chapse. | 2. Láne chapsesi. | 2. Láne chapsemi. |
| 3. Láne chamme. | 3. Láne chammesi. | 3. Láne chamnemi. |

*Preterite.**First person.*

- | | | |
|-------------------|---|---|
| 1. Láne chapti. | 1. { Láne chaptaso, incl.
Láne chaptasiki, excl. | 1. { Láne chaptaso, incl.
Láne chaptaki, excl. |
| 2. Láne chaptisi. | 2. { Láne chaptasosi.
Láne chaptasikisi. | 2. { Láne chaptasosi.
Láne chaptakisi. |
| 3. Láne chaptimi. | 1. { Láne chaptasomi.
Láne chaptasikimi. | 3. { Láne chaptasomi.
Láne chaptakimi. |

Second person.

- | | | |
|-------------------|---------------------|---------------------|
| 1. Láne chapte. | 1. Láne chaptasi. | 1. Láne chaptani. |
| 2. Láne chaptesi. | 2. Láne chaptasisi. | 2. Láne chaptanisi. |
| 3. Láne chaptemi. | 3. Láne chaptasimi. | 3. Láne chaptanimi. |

Third person.

- | | | |
|-------------------|---------------------|---------------------|
| 1. Láne chapta. | 1. Láne chaptasi. | 1. Láne chaptami. |
| 2. Láne chaptase. | 2. Láne chaptasesi. | 2. Láne chaptasemi. |
| 3. Láne chaptame. | 3. Láne chaptamesi. | 3. Láne chaptamemi. |

Infinitive.

It is wanting as in all the passives.

Participles.

- 1st in "ba," wanting.
 2nd in "chome," Láne chapchome.
 3rd in "na," Láne chamna.
 4th in "me," Láne chamyime, &c.
 5th in "me," Láne chaptime, &c.

Gerunds.

- 1st in "na," Láne chamyina, &c.
 2nd in "na," Láne chaptina, &c.
 3rd in "ko," Láne chamyiko, &c.
 4th in "ko," Láne chaptiko, &c.

Remark.—The precedent is given in full, 1st, because it affords a sample of transitives, in "po:" 2nd, because it demonstrates that these so-called moods are merely compound verbs which (like the case signs) can be multiplied ad infinitum, but have little to do with grammar.

Duty, necessity; I must, or ought.

It is expressed by the impersonal use of the verb dyúm to become, put after the main verb in the regular infinitive with the separate objective pronoun preceding both.

Imperative wanting.

INDICATIVE MOOD.

*Singular.**Dual.**Plural.*

Gó lácho dyum.*

{ Gósi lácho dyum, incl.	{ Góyi lácho dyum.
{ Gósuku lácho dyum, excl.	{ Góku lácho dyum.

* Quasi mihi ire fit, i. e. decet vel necesse est, in Khas, mañlai janu parcha.

Second person.

Ga lácho dyum.

Gasi lácho dyum.

Gani lácho dyum.

Third person.

Harem lácho dyum.

Haremdausi lácho dyum.

Haremdau lácho dyum.

*Preterite.**First person.*

Gó lácho dyumta.

{ Gósi lácho dyumta.
{ Gósuku lácho dyumta.{ Góyi lácho dyumta.
{ Góku lácho dyumta.*Second person.*

Ga lácho dyumta.

Gasi lácho dyumta.

Gani lácho dyumta.

Third person.

Harem lácho dyumta.

Haremdausi lácho dyumta.

Haremdau lácho dyumta.

OPTATIVE MOOD.

Wish, desire.

*Indicative present.**First person.**Singular.*

1. Wa lála dwáng.

Dual.{ Isi lála dwáng, incl.
{ Wasi lála dwáng, excl.*Plural.*{ Ike lála dwáng.
{ Wake lála dwáng.*Second person.*

2. I lála dwáng.

Isi lála dwáng.

Ini lála dwáng.

Third person.

3. A lála dwáng.

Asi lála dwáng.

Ani lála dwáng.

Preterite.

1. Wá lála dwakta.

{ Iyi lála dwakta, incl.
{ Wasi lála dwakta, excl.{ Ike lála dwakta, incl.
{ Wake lála dwakta, excl.

2. I lála dwakta.

Iyi lála dwakta.

Ini lála dwakta.

3. A lála dwakta.

Asi lála dwakta.

Ani lála dwakta.

Formed of the conjunct possessives, of lála, a verbal noun from lá, to go, and of dwáng, dwakta, the 3rd person of the intransitive dwakko, to be desirous, present and preterite used impersonally.

PRECATIVE MOOD.

Oh! that I might go.

Let me go.

*Imperative.**Singular.*

1. Lácho gíyi.
2. Lácho gíyisi.
3. Lácho gíyini.

Dual.

1. Lácho gísiki.
2. Lácho gísikisi.
3. Lácho gíkisi.

Plural.

1. Lácho gíki.
2. Lácho gíkisi.
3. Lácho gíkini.

*Indicative present.**First person.*

1. Lácho gíyi.	1. { Lácho gíso. Lácho gísiki.	1. { Lácho gíso. Lácho gíki.
2. Lácho gíyisi.	2. { Lácho gísoki. Lácho gísikisi.	2. { Lácho gísosi. Lácho gíkisi.
3. Lácho gíyimi.	3. { Lácho gísomi. Lácho gísikimi.	3. { Lácho gísomi. Lácho gíkimi.

And so on conjugating the transitive gíwo, to give, in the passive voice, like the passive of jáwo, to eat aforegone. Lácho gíyi = let me go, give me to go. But observe that in order to say let *him* go, you must use the active voice, as below.

Singular.

Let me go, lácho gíyi.
Let him go, lácho gíwo.

Dual.

Let us two go, lácho gísiki.
Let them two go, lácho gíwosi.

Plural.

Let us all go, lácho gíki.
Let them all go, lácho gíwomi.

Remark.—If to these forms we add those of the middle voice. S. Lácho gíso. D. Lácho gísche. P. Lácho gísine, we have a good clue to the character of the three voices in this language which are based upon the idea of me, the speaker, being the exponent of the passive; of self, the spoken to, being that of the middle; and of him, or her, or it, the spoken of, being that of the active voice, Gí-wo = give him: Gí-so = give thyself: Gí-yi = give me, are respectively the starting points of the active, middle and passive voices.

INTERROGATIVE MOOD.

It resembles the indicative, lágná I shall go, or shall I go?

PROHIBITIVE AND NEGATIVE MOOD.

There is no separate form of the negative verb as in Dravidian tongues, nor even any prohibitive particle distinct from the negative.

Má prefixed expresses verbal negation and prohibition and also nominal privation, e. g. Má jáwo, eat not. Má jágna, I do not eat. Má neuba, not good = bad.

INCEPTIVE MOOD.

It is formed by subjoining to the ordinary infinitive form (cho) of the main verb, the subsidiary intransitive verb prénso, to begin, or the transitive páwo, to do, to make: e. g. túcho páwo, begin to drink; túcho papta, he began to drink; jácho prénso, begin to eat; jácho, prensigna, I begin to eat.

FINITIVE MOOD.

It is formed as above, but substituting for páwo or prénso the transitive theumo (conficio), e. g. jácho theumo, finish eating. jácho theumtong, I have done eating. Sometimes “ne,”* replaces the infinitival “cho” of the main verb.

* The infinitival sign varies, not always intelligibly. Where purpose is meant “tha” is the sign, as játha láti, I went to drink, i. e. for the purpose of drinking. Where commencement and end are expressed, “ne” is more frequent than “cho” jáne prénsigna, jáne theumu, I shall begin to eat, and I shall have done eating. So also where wish is expressed jáne dwaktong, I wished to eat. But cho is the common form and always used alone, as Jácho má jácho ágyem neu, which is better to eat or not to eat.

N. B.—The neuters ryipo (desino) and dyumo (fio), to be ended or to end cannot be used in this way and prenso, to be begun or to begin (self) is much rarer in such use than páwo. Ryipcho páwa is, it nears its end, literally it makes to an end, or to be ended.

CONTINUATIVE MOOD.

It is formed by adding sógno (sense doubtful) to the root of the main verb and therewith conjugating the intransitive verb bwakko, to remain (see conj. III.), e. g. continue eating, jásoгно bwakko. *N. B.*—The definite present and past are also thus expressed.

Imperative.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jáso-gno bwakko (eat continuously or keep eating.)	Jáso-gno bwakse incl.	Jáso-gno bwangne.

Indicative present.

First person.

Jáso-gno bwanggna.	} Jásoгно bwaksa, incl. } Jásoгно bwaksuku, excl.	} Jásoгно bwangya. } Jásoгно bwakka.
--------------------	--	---

Second person.

Jasogno bwangye.	Jasogno bwaksi.	Jasogno bwangni.
------------------	-----------------	------------------

Third person.

Jasogno bwang.	Jasogno bwakse.	Jasogno bwamme.*
----------------	-----------------	------------------

Preterite.

First person.

Jasogno bwakti (I ate continuously or I was eating.)	} Jasogno bwaktasa, incl. } Jasogno bwaktasuku, excl.	} Jasogno bwaktayo. } Jasogno bwaktako.
--	--	--

Second person.

Jasogno bwakte.	Jasogno bwaktasi.	Jasogno bwaktani.
-----------------	-------------------	-------------------

Third person.

Jasogno bwakta.	Jasogno bwaktase.	Jasogno bwaktame.
-----------------	-------------------	-------------------

Infinitive.

Jasogno bwakcho.

Participles.

1st in ba, Jasogno bwakpa (ba). (Surd requires surd).

2nd in chome, Jasogno bwakchome.

3rd in na, Jasogno bwangna.

4th in me, Jasogno bwangname, &c. 11 forms, ut supra.

5th in me, Jasogno, bwaktime, &c. ditto ditto.

* Observe the change of the radical k into ng and m, bwak-ko, bwang-gna, bwam-me. It is constant in all verbs neuter in "ko."

Gerunds.

1st in na, Jasogno bwangnana, &c. 11 forms.

2nd in na, Jasogno bwaktina, &c. ditto.

3rd in ko, Jasogno bwangnako, &c. ditto.

4th in ko, Jasogno bwaktiko, &c. ditto.

Remark.—The above is given in full as an exemplar of intransitives in “ko.” The transitives of the same conjugation (III.), have the like *euphonic* changes, and for the rest their conjugation may be determined by analogy with the help of the premises already supplied. The indicative present singular alone varies and that is set down in the classification of verbs. The radical “k” becomes “g” in the active voice, and “ng” in the passive and causal, e. g. pók-ko, póg-u, póng-yi, póng-páto.

ITERATIVE MOOD.

Raise repeatedly, pókko, mókho, bwákko.

It is formed by adding to the imperative of the main verb, whether transitive or intransitive, the word mókho (sense unknown) and to it subjoining the verb bwákcho, to remain, as in the last mood to which this is very nearly allied in sense. There however we have compound conjugation according to the sense of the primary and secondary verbs which are both conjugated with mókho, immutable, between them. e. g.

Ípo mókho bwákko, sleep repeatedly. Pókko mókho bwákko, raise repeatedly.

Ímgna mókho bwanggna, I sleep repeatedly. { Pógu mókho bwanggna, I raise repeatedly.

Ípti mókho bwakti, I slept repeatedly. { Póktong mókho bwakti, I raised repeatedly.

And so on through the whole of the intransitive conjugation in “po” (VI.) and of the transitive in “ko” (III.) The definite sense of the present and preterite. I am sleeping, I was sleeping, I am raising, I was raising, is likewise thus expressed.

Conjugation with auxiliar substantive verb and participle.

Of the 4 substantive verbs, ká, khé, gnó, and bwá, the three first express essence and entity; the last, presence, being in a certain place, corresponding respectively to the Khas ho and cha, and to the Newári kha and du, or chóna. Of the Báling 4 the last or bwá is alone used as an auxiliar and it is compounded with the (apparent) participle or gerund aforegone, or jasogno to procure, definite present (or future) and past tenses of any and every verb in the manner there seen, e. g. písogno bwanggna, I am coming: písogno bwakti, I was coming: teupsogno bwanggna, I am beating: teupsogno bwakti, I was beating.

Remark.—Jásogno, which gives the continuative and the definite form of the tenses above, seems to spring from the impersonal past gerund in “so,” jaso vel jasomami. But that is not clear, though it be so that, whatever else jasogno is, it is a form of every verb useable with the auxiliar in conjugation.

Jásogno bwanggna = I am eating.

Jásogno bwakti = I was eating.

Písogno bwanggna = I am coming.

Písogno bwakti = I was coming.

Brésogno bwanggna = I am summoning.

Brésogno bwakti = I was summoning.

Compound verbs with each element conjugated.

Jwagdíwo, to arrive.*

IMPERATIVE MOOD.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jwagdíwo.	Jwagdise.	Jwagdine.

Indicative present.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jwanggnadígna.	{ Jwaksadisa, incl. Jwaksudisuku, excl.	{ Jwangyadiya, incl. Jwakkadika, excl.
Jwanggnediye.	Jwaksidisi.	Jwangnidini.
Jwangnidí.	Jwaksedise.	Jwangmedime.

Præterite.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Jwaktidíti.	{ Jwaktasaditasa. Jwaktasuditasuku.	{ Jwaktayodintayo. Jwaktakodintako.
Jwaktedite.	Jwaktasidítasi.	Jwaktanidíntani.
Jwaktadíta.	Jwaktasedítase.	Jwaktamedímtame.

INFINITIVE MOOD.

Jwakchodícho.

Participles.

1st in ba, Jwakpadíba.

2nd in chome, Jwakchodíchome, &c.

3rd in na, Jwangnadína, &c.

4th in me, Jwanggnamedígname, &c.

5th in me, Jwaktimedítame, &c.

Gerunds.

Impersonal of the present. None.

Impersonal of the past.

Jwaksomamidísomani or Jwaksodíso.

* Jwákko, is an intransitive in "ko" meaning to arrive, and it can be conjugated separately; but, with that love of specialization which is so characteristic of Kiranti verbs, it is always used in conjunction with the verb to come (píwo) or to go (díwo). Jwagdíwo as a single word can be also so conjugated. The remarkable thing is that each verb of the compound can be conjugated.

Personated Gerunds.

- | | |
|-----------------------|------------|
| 1st, Jwanggnadígnana, | } present. |
| 2nd, Jwaktidítina, | |
| 3rd, Jwanggnadígnako, | } past. |
| 4th, Jwaktadítako, | |

*Causal Verbs.**

All verbs whatever can be made causal by adding to their root the transitive verb páto, from pa† to do or make. But pá makes its regular transitive in "wo," páwo. Páwo is do; páto, do for him, on his behalf; and this leads me to observe that every transitive verb, save those in "to," has the following six forms.

1. Teupo, strike him, active transitive in "po."
2. Teum-so, strike thyself, reflex transitive, or middle in "so."
3. Teum-yi, strike me, passive in "i."
4. Teup-to, strike it for him, active transitive in "to."
5. Teum-so, strike it for thyself, middle in "so."
6. Teupti, strike it for me, "passive in "ti."

So also pá, to do, has pá-wo. páso, páyi; páto, páso and pati: and kwó, to see, has kwóño, kwóso, kwóyi; kwoto, kwoso and kwoti: and pok, to raise has pokko, pokso. pongyi; pokto, pokso, pokti; and in like manner every other transitive, except those in "to" as the primary form. It is the secondary form of the transitive of the verb to make, or páto, which is used for constructing causals, but yet it takes the passives in "i," not "ti," when thus employed, though, when used separately, it assumes its regular form in "ti"—an anomaly, like that of the use of the reflex or middle voice in one form and two senses (2.5).

But besides the regular causal formed by páto added to the root of the main verb (e. g. kwopáto, cause to see), there are other means of constructing causals which shall be first mentioned before proceeding to exhibit the conjugation of the former.

These means are, 1st the hardening of the initial consonant of an intransitive, as—

Dokko, fall.	Tokko, cause to fall.
Dyúmno, become.	Thyúmno, cause to become.
Gúkko, be crooked.	Kúkko, crooken or make crooked.

* Besides its ordinary use, the causal form of the verb is frequently used, especially in its middle voice, as a passive. Thus, jápáso is, be thou eaten, or suffer thyself to be eaten, implying voluntariness on the part of the patient; and so némpáso is let thyself be kissed. All three voices, however, can be used thus and frequently are so, whenever the complex pronominalization of the primary verb causes embarrassment. The passive use of the causal is very common in Himalaya, and is often, as in Newári, the only substitute for a passive. This is not wonderful in so crude a tongue as Newári: it is so, however, in the Kiranti language which possesses the great secret of the most refined conjugation in its neat personal suffixes and its power of euphonic compounding. Owing however to too much attention to the agents, and too little to the action, the Kiranti verb with all its constructive richness on one side, shows equal poverty on another, and hence the passive use of the causal form.

† The root pá, pí in Váyu, an allied Himalayan tongue, is the same as the Dravidian causative.

Gíkko, be born.
 Jíto, be horn.
 Bokko, get up.
 Bukko, be burst.

Kíkko, beget or give birth to.
 Chító, tear.
 Pokko, raise, or make get up.
 Pukko, burst.

2nd, by dropping the intransitive sign whatever it be, and substituting the transitive sign in "to," or "ndo" (do).

Píwo, come.
 Ráwo, come.
 Díwo, go.
 Láwo, go.
 Kúwo, come up.
 Yúwo, come down.
 Dwakko, be desirous or long.
 Túgno, drink.
 Wogno, issue.
 Glúgno, enter.
 Cháyínso, learn.
 Níso, sit.
 Khleuso, lie hid.

Pító, bring.
 Ráto, bring.
 Díto, take away.
 Láto, take away.
 Kúto, bring up.
 Yúto, bring down.
 Dwakto, desire it, or long for it.
 Túndo, cause to drink.
 Wondo, extract.
 Glúndo, insert.
 Cháyíndo, teach, i. e. cause to learn.
 Níto, set down.
 Khleundo, hide it.

I need not point out what an important analogy with the Dravidian tongues the first (nay, both) of these two processes presents, but I may add that this analogy is in perfect keeping with the further habit of this Himálayan language of hardening or doubling the indicative present sign by way of making a preterite, as

Myelda, he is sleepy.
 Sáda, he kills.
 Kwáda, he puts on the fire.
 Gramda, he hates.
 Teuba, he strikes.
 Bréta, he summons.
 Khleuta, he conceals.
 Soda, he tells it.

Myelta, he was sleepy.
 Sáta, he killed.
 Kwáta, he put on the fire.
 Gramta, he hated.
 Teupta, he struck.
 Brétta, he summoned.
 Khleutta, he concealed.
 Sotta, he told it.

Add to these analogies the common habit of Báhing and Támil of annexing the conjugational sign to the imperative and that that sign is indifferently applied to intransitives and transitives (leaving the style of the indicative to difference them); and further that the conjunct pronominalization of their verbs and nouns is by prefixing in regard to the nouns and suffixing in regard to the verbs,* not to mention several other analogies cited in the sequel, and Messrs. Muller and Caldwell will find it difficult to maintain their assertion that there is nothing Dravidian in the structure of the Himálayan tongues!

* Teub-u, I strike
 Teub-i, Thou strikest
 Teub-a, He strikes
 Pog-u, I raise
 Pog-i, Thou raisest
 Pog-a, He raises
 Bret-n, I summon
 Bret-i, Thou summon'st
 Bret-a, He summons

Wa popo, My uncle.
 I popo, Thy uncle.
 A popo, His uncle.
 Wagu, My hand.
 I gu, Thy hand.
 A gu, His hand.
 Wa daubo, Myself.
 I danbo, Thyself.
 A daubo, Himself.

[*Remark.*—Wa, i, a, the pronominal adjuncts are perfectly distinct from the separate pronouns; and, wa being = u, the adjuncts of verb and noun tally to identity. Here, then, is the alleged diagnosis of Dravidianum more fully developed than in any Dravidian tongue.

Many verbs, identical in form, in the imperative yet differ in sense as *Khiwo*, n. tremble and *khíwo*, a. quarrel, *úto*, n. fall; *úto*, a. fell. Many, again, materially change their sense in passing into the causal or transitive form from the intransitive or neuter; and, lastly, the causal form of neuters and of transitives, though very generally of the normal construction in *páto* added to the root (*ipo*, sleep; *impáto*, cause to sleep), yet in the case of many verbs of both sorts in “*po*” and in “*gno*,” is not so, the alteration being effected by changing their sign into the transitive “*to*” vel “*do*” sign, as *ipo*, sleep; *ipto*, cause to sleep (a synonyme of *impáto*); *túgno*. drink, *túndo*. (= *túpáto*) cause to drink. When the sense is much altered in such transition, the derivative causal of a neuter is constantly regarded as an independant word and primitive verb, and the neuter takes the normal causal form, thus *láwo*, n. = go, has *láto* for its causal: but, *láto* being used to signify take away, *lápáto* is made to express the precise sense of cause to go.

All this shows, when taken in connexion with the general transformability of all transitives not primitively in “*to*” into that form, the pre-eminent transitive and preterite character of that widely diffused sign.

It also shows how apt causal is to be equivalent to transitive—another widely prevailing Turanian trait, and one harmonising with the almost identity of neuter and intransitive. And here we may remark another special characteristic common to the Himálayan and Dravidian tongues, viz. double causation. Thus in Bábing (and it is the same in many others of our tongues) *ipo*, sleep, *impáto*, cause to sleep; *impápáto*, cause to cause to sleep. *Gikko*, be born; *Kikko* or *Gingpáto*, cause to be born; *Kingpáto* or *Gingpapáto*, cause to cause to be born; to which we may add, *Kingpápáto* expressing causation in the *third* degree from the primitive *gikko*: and the like holds good with regard to every neuter undergoing a similar change with *Gikko*.

I proceed now to exhibit an exemplar of the normal causative form of verbs, taking the instance of the verb to eat. Root, *Já*. Causal transitive, *Jápáto*. Causal reflex, *Jápáso*. Causal passive, *Jápáyi*. The prefixed root does not affect the grammatical form of the auxiliars save as above stated. *Páto* therefore in this combination will afford a sample of all transitives in “*to*” which change the “*t*” into “*d*.” Of the unchanging transitives in “*to*” I have given a model in *Bréto*. I shall here give *Páto* in full in its combination with *Já*, as a sample of the changing conjugation in “*t*” (see conjugation X.) merely premising that *páso*, as an intransitive in “*so*” (see conjugation XIII.) and *páyi* as a passive in “*i*” (*yi* to keep the vowels apart merely)* have already been given in full, as also the passive in “*ti*,” (vide *Bréto*).

Paradigm of a causal verb.

ACTIVE VOICE.

Imperative Mood.

<i>Singular of Agent.</i>	<i>Dual of Agent.</i>	<i>Plural of Agent.</i>
1. <i>Jápáto.</i>	1. <i>Jápáse.</i>	1. <i>Jápáne.</i>
<i>Dual of Object.</i>	<i>Dual of Object.</i>	<i>Dual of Object.</i>
2. <i>Jápátosí.</i>	2. <i>Jápásesí.</i>	2. <i>Jápánesí.</i>
<i>Plural of Object.</i>	<i>Plural of Object.</i>	<i>Plural of Object.</i>
3. <i>Jápátomi.</i>	3. <i>Jápásemi.</i>	3. <i>Jápánemi.</i>

* *M* also requires the *y*, for example, *teum-yi*, strikes me he or thou, = *I* am struck, see remarks aforegone. It is because the *agent* may be he or thou (any one) in the passive, that the passive runs so near parallel with the 2nd *special* form of the verb.

INDICATIVE MOOD.

*Present and Future Tense.**First person.**Singular.*

1. Jápadu.
2. Jápádusi.
3. Jápádumi.

Dual.

1. { Jápása, incl.
Jápasúkú, excl.
2. { Jápásasi, incl.
Jápasúkúsi, excl.
3. { Jápásami, incl.
Jápá-úkúmi, excl.

Plural.

1. { Jápáya, incl.
Jápáká, excl.
2. { Jápáyosi, incl.
Jápákosi, excl.
3. { Jápáyomi, incl.
Jápákomi, excl.

*Second person.**Singular.*

1. Jápádi.
2. Jápádisi.
3. Jápádimi.

Dual.

1. Jápási.
2. Jápásisi.
3. Jápásiimi.

Plural.

1. Jápáni.
2. Jápánisi.
3. Jápáimi.

*Third person.**Singular.*

1. Jápáda.
2. Jápádasi.
3. Jápádami.

Dual.

1. Jápáse.
2. Jápásesi.
3. Jápásemi.

Plural.

1. Jápáme.
2. Jápámesi.
3. Jápámemi.

*Preterite.**First person.**Singular.*

1. Jápátong.
2. Jápátongsi.
3. Jápátongmi.

Dual.

1. { Jápátasa, incl.
Jápátasuku, excl.
2. { Jápátasasi, incl.
Jápátasukusi, excl.
3. { Jápátasami, incl.
Jápátasukumi, excl.

Plural.

1. { Jápátayo, incl.
Jápátako, excl.
2. { Jápátayosi, incl.
Jápátakosi, excl.
3. { Jápátayomi, incl.
Jápátakomi, excl.

*Second person.**Singular.*

1. Jápáteu.
2. Jápáteusi.
3. Jápáteumi.

Dual.

1. Jápátasi.
2. Jápátasisi.
3. Jápátasimi.

Plural.

1. Jápátani.
2. Jápátanisi.
3. Jápátanimi.

*Third person.**Singular.*

1. Jápáta.
2. Jápátasi.
3. Jápátami.

Dual.

1. Jápátase.
2. Jápátasesi.
3. Jápátasemi.

Plural.

1. Jápátame.
2. Jápátamesi.
3. Jápátamemi.*

* Observe for a moment the singular neatness, euphony and precision of these forms. The single words Jápátamesi and Jápátamemi must be rendered into English by they all fed them two and they all fed them all; into Newári, by amisang, aminihma yata nakala, and amisang amita nakala. And, but for the happy term to feed in English, the distinction would be greater still. In Khas the equivalents are, uni heru le ú uwi lai khuwaiyo and uni heru le ú heru lai khuwaiyo or six words for one!

INFINITIVE MOOD.

Jápácho, aoristic as usual.

Participles.

1st in ba, Jápába, who feeds or will or did feed.

2nd in chome, Jápáchome, feedable, whom or with what any one feeds or will feed.

3rd in na, Jápána, fed, whom or with what any one has fed.

4th in me, Jápádume, &c. 33 forms. Feedable by me; whom or with what I feed or will feed, &c.

5th in me, Jápátongme, &c. 33 forms. The fed of me; whom or with what I fed, &c.

N. B.—1—3 are impersonal, as before: 4—5 are personated.

Gerunds.

Impersonated of the present and future. None.

Impersonated of the past, Jápáso, or Jápásomami.

Personated present.

1st in na, Jápáduna, &c. 33 forms.

2nd in na, Jápátongna, &c. 33 forms.

Personated past.

1st in ko, Jápádúko, &c. 33 forms.

2nd in ko, Jápátóngko, &c. 33 forms.

Specimen of the Kíránti language (Báhing dialect).

Kwóng múryeu hópo ke di brétha látá. Gyékhopáso brétha dáyána. Wa khyim di kwóng múryeu, rásogno bwaktako, wa ming nung dwángmóse. Gó harem gyánaiyo ná táгна, syú, syú. Ike nyau ásrá jajulso, myem sícho, láma, dásó, binti* pápta.

Mokoding hóponi harem kwóng rí nyúba gyáwa dyampattame sísi giptako chyanta, yem sísi í ming giptako, syúyo ná giwo, dásó, lópáso, giwo. Hárem múryeumi myem khógno pápta. Hóponi yo chíwacha dau brétamiko chyantáni. Synke di rínyuba gyáwa rínám, myem rácho.

Mékeding ryamúpo béla* kwósomami ming ke di díta. Myem mingmi wádi rínyúba gyáwa kblyakti giptáko mócho prénsta, wára

* N. B.—Nyau, ásrá, binti, and béla are Hindi terms having no precise equivalents in the Kiranti tongue; though it would be easy to turn the phrases so as to replace them by pure Kiranti terms I leave them as samples of a process every where going on in the Central Himálaya whose still primitive languages will probably in time become first mixed and then obsolete.

dáyana, wa wancha mi syu (or su) má gíwo mótime bwá. Naka ga wa ram khome bwagne, i kamdi mára khéda syu ke kam di ra data (or móta). Mékeding ryamnípo khyim ding glutana chîwachadaúmi á rí tamtameko, myem simtámeke, hópo ke di chótha dintame.

Mékeding hópomí á wancha brétako, móta, yem í ryamnipo, dwákti khedda chyáro, dwaktikhedda plyénti gíwo (or plyenotako) dáso dáta.

Translation of the specimen of the Kíránti language (Báhing dialect).

A certain person went to his prince to complain of a man who was in the habit of coming constantly to his house to make love to his wife, but whom he could never contrive to identify. To his sovereign he said, 'relying on your justice, I appeal to you to have this man arrested.' The Rájah thereon gave the petitioner a phial filled with scented oil and said to him, 'give this phial to your wife and caution her at the same time not to give it to any one.' The man did as he was bade and the Rájah, when he was gone, instructed his spies to look after the matter and to seize and bring to his presence any person they might detect coming from the plaintiff's house, whose clothes had the scent of attar.

By and by, the lover finding an opportunity went, as before, to his mistress who rubbed the attar on his clothes and said to him. 'My husband desired me to give this attar to no one, but you are my life, my soul, how should I refuse it to you? If you like it; take it. I can have no other use for it.'

As the lover, thus anointed with attar, thereafter left the house of his mistress the spies of the Rájah who were on the look out for him, seized him and carried him to the Rájah.

The Rájah thereon sent for the woman's husband and said to him, 'this is your wife's lover. If you please, kill him: if you please, let him go.'

B. H. HODGSON.

October, 1857.

On the Váyu tribe of the Central Himálaya.—By B. H.
HODGSON, Esq.

The Váyus, vulgarly called Háys, inhabit the central Himálaya, and the central region of that part of the chain.* They are subjects of Nepal, tenantiug the basin of the river Kósi between the confines of the great valley of Nepal proper and that point where the Kósi turns southwards to issue into the plains. The Váyus belong to that interesting portiou of the Himálayan population which, in the essay adverted to, I have denominated the broken tribes—tribes whose status and coudition, relatively to those of the unbroken tribes, sufficiently demonstrates that they are of much older standiug in Himálaya than the latter. The Váyus are in an exceedingly depressed condition, gradually passing to extinction probably. Their numbers do uot now exceed a few thousauds, how many, I have no means of ascertaining.

Their high antiquity and the complex character of their language, give them, especially in connexion with other tribes of Himálaya similarly characterised, very great interest as an element of Himálayan population. They consider themselves as a single people distinct from all their neighbours. Their language, which has no marked dialects, and is quite unintelligible to any but themselves, supports this view. So also does their perfect community of habits and customs, though they recognise certain distinctions among themselves, of no practical importance, but marked by specific designations, of which the chief are Yákúm, Dóphóm, Kousino, Bálung, Phoncho, Kámaléchho, &c.

Bálung, I know, means exorcist in the Váyu tongue; and the other terms probably point to some perhaps now forgotten avocations. At all events they caauot explain the force of the terms.

They have a tradition of a very remote time when they were a numerous and powerful people, but never haviug had the use of writing, their remote past is too vague for ascertainment, no foreign and cultivated people having ever noticed and recorded their exist-

* See new edition of essay on physical geography of Himálaya now issuing from the press under the auspices of Government.

ence. The religious ideas of the Váyus are extremely vague, nor does their language afford any term for *the* Deity or even for *any* deity though they have, as usual, an exorcist who is their only priest and physician and to whom they look for relief from all those evils which malignant influence, whatever it be, afflicts them with. They are a very inoffensive industrious race employed in the cultivation of the earth. Their use of the plough is noticeable from its rarity in these regions.

As it has been the chief object of this paper to illustrate the highly interesting language* of the Váyus I shall not at present say more of their status, manners and customs than by a reference to their own account of these conveyed in the statement subjoined to the language as a sample thereof and of which translation was there furnished.

But the physical traits of the Váyu are of an importance second only to that of his language, and the following description will help to illustrate them.

Dimensions of a man named Páte, a Váyu of the Yákum caste, aged twenty-eight years, in the service of Captain Gojráj Thápa of Nepál.

Height,	..	..	..	5. 0.0
Crown of head to hip,	..	..	..	1.11. $\frac{1}{2}$
Hip to heel, ..	..	..	..	3. 0. $\frac{1}{2}$
Length of arm and hand,	..	..	..	2. 2. $\frac{1}{2}$
Girth of head,	..	..	..	1. 9.0
Girth of arm,	..	..	..	0. 9.0
Girth of forearm,	..	..	..	0. 9. $\frac{1}{2}$
Girth of thigh,	..	..	..	1. 6 0
Girth of calf,	..	..	..	1. 1.0
Girth of chest,	..	..	..	2.11.0

Páte is rather below than above the standard height of his fellows, which may be taken at about five feet three inches. His colour is a

* I meant to have prefaced the details by a few general remarks under the usual heads of article, noun, pronoun, &c. But time runs short and the philological reader will readily apprehend these from the details already given whilst other classes of readers are little likely to pay any attention to the matter.

pure isabelline brown without the least trace of ruddiness in the skin or hair. The eye is dark hazel and the hair long, straight, black, ample on the head, scant every where else.

Vertical view of the head oblate ovoid, rather wider behind than before but not much, and flattish behind.

Bachycephalic. Facial angle very good, the mouth being only moderately salient and the forehead of good height, forwardness and breadth, but the chin defective. Eye-brows even, scantish. No beard or whisker, and a very small moustache. Eyes small, flush with the cheek, oblique, very wide apart, drooping upper lid bent down at the inner angle. Nose rather short, straight, depressed between the eyes, moderately salient elsewhere, broad at end and having large round nostrils. Mouth moderately salient, the peculiar thickening of the upper gum, which chiefly causes the saliency, being not great, and the lips not tumid, only moderately full. Teeth vertically set, strong, white. Chin retiring and small. Zygomæ and cheek bones very salient to the sides and profile flat. Front view of the face squarish, owing to the large angular jaws which are as salient laterally as the zygomæ.

Remark.—This young man's physiognomy is distinguished by the full Turanian breadth of head and face. Two others of his race whom I examined—a man of fifty-eight years and another of thirty years—had not the same breadth nor the same perfectly Kalinac eye. These men measured nearly 5.5.0 and were several shades darker in colour than Pâte; and upon the whole I incline to regard them as more normal samples of the race than Pâte. In a word, I think that I have sufficient grounds for concluding that the Váyus are in general somewhat darker and of a less decidedly Mongolic cast of countenance than the Lepchas (for example), from whose perfectly Turanian type, they lean towards the Turkic and Dravidian subtypes, which again approach the Arian, and are seen in the Kiránti tribe of Himálaya more clearly and more frequently than in the Váyu tribe.

The elder of the two individuals above adverted to, I was enabled to examine rapidly whilst Mr. Scott photographed him. He was 5.4.½ in height, moderately fleshy and dark brown. Vertical view of the head oblate. Wider and flat behind, greatest breadth between

the ears. Rising pyramidally from the zygomæ to the crown of the head. Facial angle not bad, the forehead retiring and narrowing only slightly, the mouth not being porrect, nor the chin retiring but pointed. Eyes remote, not small, but the upper lids flaccid and somewhat down-curved at the inner canthus. Nose pyramidal, not levelled between the eyes nor the extremity much thickened, but the nares large and round. Mouth large but well fermed, with neatly shaped lips and vertical fine teeth.

The younger man above alluded to was 5.5.0 and as dark as an ordinary native of the plains whom he further resembled in his unflatted, face though his eye wanted the fullness and shapeliness of that of the lowlanders beside whom I placed him.

When placed beside some Dhángars of the Uráon tribe the impression made upon me by a comparison of the whole was, that the physical type is one and the same in the highlanders and lowlanders; that the type is flexible to a large extent; and that the general effect of the northman's residence for ages in the malarious and jungly swamps of the plains is to cause the Turanian type to incline towards the Negro type but with a wide interval from the latter. The Uráon compared with the Váyu has less breadth of head and face, more protuberance of mouth, and a better shaped, larger eye, not down curved next the nose; and it is thus, I conceive, that the Negro type differs from the Turanian.

On the Kiránti tribe of the Central Himálaya.—By B. H.

HODGSON, Esq.

It has been the main purpose of one of the preceding papers to examine the grammatical structure of the Kiránti language as a second sample of that class of Himálayan tongues (the Váyu tongue, already examined, being the first) which I have elsewhere denominated the pronomenalized or complex.*

The opinion of such scholars as Müller and Caldwell that the Himálayan tongues have nothing Dravidian about them, can thus

* See essay on physical geography of Himálaya and other papers now issuing from the Calcutta press under the auspices of Government.

be tested, and I think shown to be a mistake ; and it will be further demonstrated, I trust, by these and other investigations which I hope soon to complete, that the Himálayans are closely connected, as well with the southern as with the northern members of the family of Túr—members by no means so disjoined and dissimilar as it is the fashion to represent them.

As a supplement to the grammatical details, I will now give such a sketch of the Kiránti people, as at present existing in Nepal, as will, I hope, add to the interest and value of the philological portion of my essay.

The Kirántis, on account of their distinctly traceable antiquity as a nation and the peculiar structure of their language, are perhaps the most interesting of all the Himalayan races, not even excepting the Newárs of Nepál proper.

By means of the notices contained in the Classics of the east and west* we are assured that the Kiránti people was forthcoming in their present abode from 2000 to 2500 years back, and that their power was great and their dominion extensive, reaching possibly at one time to the delta of the Ganges. Moreover, the general tenor of these classical notices is confirmed by the Vansávalis or chronicles of Nepál proper which show a long line of Kiránti sovereigns ruling there from the mythic age of the shepherd kings (Gópál) down to the 14th century of our æra. And lastly, these distinct historical data harmonise with a well-known tradition which assigns a very unusual (in these regions) amount of power and population to the “many-tongued” Kiránti. We know not when the Kirántis were expelled from the plains of India ; if indeed they ever held permanent possession there. But it was the Mall dynasty of Nepál proper which about the middle of the 14th century expelled them from the great valley ; and the Sáhś of the eastern or Vijayapur branch of the Makwánis by whom their independance in the mountains, probably about the same period, was greatly trenchèd on, whilst the Sáhś of the house of Gorkha, now sovereigns of the modern kingdom of Nepal, completed the subjection of the Kirántis about a century ago.

* See Müller apud Bunsen and Caldwell and lists of castes taken from Menu and the Puránas apud Calcutta Quarterly.

Adverting to the high recorded antiquity of the terms *Kirát* or *Kiránt* and *Kiráti* or *Kiránti* (vague nasal) as applied respectively to the country and people, even to this hour, it is remarkable that the *Kirántis* themselves do not readily admit the genuineness or propriety of those terms, but prefer the names *Khwombo* vel *Khombo* and *Kiráwa* as their general personal designations and seem to have none at all for their country. But the *Kirántis*, always ignorant of letters, have been now for a long time depressed and subdued; and, huddled as they now are into comparatively narrow limits, they are yet divided among themselves into numerous tribes and septs speaking dialects so diverse as not to be mutually intelligible; and hence they are wont to think only of their sectional names and to forget their general or national one.

It is difficult, owing to the varying limits at diverse æras, to ascertain the precise force of the territorial term *Kiránt* in the view of the people themselves. But the following statement of boundaries, divisions and included septs may, I believe, be considered sufficiently accurate for all present purposes.

Kiránt.

- | | | |
|---|---|--|
| 1. Wallo <i>Kiránt</i> or
Hither <i>Kiránt</i> . | 2. Mánjh <i>Kiránt</i> or
Middle <i>Kiránt</i> . | 3. Pallo <i>Kiránt</i> or
Further <i>Kiránt</i> . |
|---|---|--|

Respective tribes.

Yákha.	Bontáva.	Chourasya.
Límbu.	Ródong.	
Lóhorong.	Dungmáli.	
Chhingtáng.	Kháling.	
	Dúmi.	
	Sáugpáng.	
	Báláli.	
	Lambichhong.	
	Báhing.	
	Thúlung.	
	Kúlung.	
	Waling.	
	Nachhereng.	

This is *Kiránt* in the larger sense, and including *Khwombuán* or *Kiránt* proper, and *Limbuán* or the country of the *Limbus*. The

popular inclusion of the latter people is important and I believe well founded, as also that of the Yákhās, though both are often alleged to be not Kirántis. They are at all events closely allied races, having essential community of customs and manners with the Kirántis, and they all intermarry, nor probably do the dialects of the Limbus and Yakhas differ much more from the Khwombu* tongue, than that tongue now does from itself, as seen in the several dialects of the septs set down above under "Middle Kiránt." The comparative vocabulary already submitted to the Society will go far to decide these questions when taken in connexion with that grammatical analysis of the Limbu tongue which I am now engaged on. The boundaries of Kiránt in its three subdivisions are—

1. Súnkósi to Likhu, } Khwombuan.
2. Likhu to Arun, }
3. Arun to Méchi and } Limbuan.
- Singilela ridge, }

Such are the territorial limits of the extant Kiránti race, in the larger sense. Their numbers probably do not now exceed a quarter of a million; but the tradition which I referred to above, assigns two and a quarter millions as the amount of their population at some remote and not well ascertained period when their country was customarily spoken of as the "no lákh kiránt," and the phrase was interpreted to mean that a house tax at two annas per family yielded nine hundred thousand annas, whence, if we allow five souls to a family, we shall obtain two and a quarter millions of people for the Kirántis inclusive of the Limbus and Yakhas, and possibly the Vayus also. The Kirántis occupy the central or healthful region of the mountains, and never descend, to dwell there, into the lowest and malarious valleys of that region. Consequently they are not reckoned among the Awálias or tribes injured to malaria. Nor can they be placed among the broken tribes, great as is their antiquity and devoid as they long have been of political independence, and moreover, allied as they are by the character of their language to the above two sections of the population of Himalaya or the Awálias and the broken tribes, (see Essay referred to above). The Chiefs or kings of the Kirántis were

* Potius Khombu. The intercalated "w" is a dialectic peculiarity of Báhing.

called Hang or Hwang. There are of course none such now nor have been for five centuries. Their village headman they still denominate Pasung, equivalent to Rai in the Khas tongue of their present masters the Gorkhalis. The pasung has still under the Gorkhali dynasty, a good deal of authority over his people. He collects their taxes and adjusts their disputes with but rare reference or appeal to the Rajah's Courts.

Unlike most of the subjects of Nepal, the Kirántis retain possession of the freeholds of their ancestors which they call walikha, and the owner, thangpung hangpa. Each holding is extensive, though not generally available, owing to the high slope of the surface, for the superior sort of culture. The boundaries of an estate are defined by the run of the water. The tax paid to the Government by each landholder or thangpung hangpa (literally, lord of the soil) is 5 rupees per annum, 4 being land tax, and 1, in commutation of the corvée.

The general style of cultivation is that appropriate to the uplands, not the more skilful and profitable sort practised in the level tracts, and, though the villages of the Kirántis be fixed, yet their cultivation is not so, each proprietor within his own ample limits, shifting his cultivation perpetually, according as any one spot gets exhausted.

Arva in annos mutant and superest ager. The plough is sometimes used, but very rarely, and the use of it at all is recent and borrowed, nor has the language any term for a plough. The produce is maize, buckwheat, millets, peas, dry rice and cotton. The general, almost exclusive, status of this people is that of agriculturists. They did not till lately take military or menial service.* They have no craftsmen of their own tribe, but buy iron implements, copper utensils, and ornaments for their women from other tribes, and supply most of their simple wants themselves. The useful arts they practise are all domestic: fine arts they have none, nor ever had: no towns, and only small villages of huts raised obliquely on the outer side on wooden posts some three to six feet, so as to get a level on the slope of the hill: size small because the children separate

* Jang Bahadur has lately raised some Kiránti regiments. He is wise and has seen in time and provided against the risk of a too homogeneous army. The Kirántis have of late freely taken menial service with us in Sikim.

on marriage; walls of thick reed, plastered, and the pent roof of grass. Each family builds for itself. The women spin and weave the cotton of native growth, which constitutes their sole wear, and the men and women dye the clothes with madder and with other wild plants—whereof one, a climber, yields a fine black colour. They make fermented and distilled liquors for themselves, and use the former in great quantities—the latter moderately.

The Kirantis have not, nor ever had, letters or literature.* Their religious notions are very vague. They have no name for the God of gods, nor even for any special deity whatever, though the term mang may be construed deity, and that of khyimmo or khyimmang, household deity or penate. Nor is there any hereditary priesthood, or any class set apart and educated for that office. Whom the mang inspires, he is a priest and his duty is to propitiate the Khyim-mang or Penate of each family by an annual worship celebrated after the harvest, and also to perform certain trivial ceremonies at marriages and deaths, but not at births. The priest is named Nakchhong, and he has, moreover, once a year, to make offerings to the manes (sankha) of the ancestors of each householder, or rather, to all the deceased members of each family.

The Kirántis believe heartily in the black art, and call its professor Krakra, Kunyamayawo, &c. The professional antagonist of this formidable person, who undoes the mischief, bodily or mental, which the other had done, who is at once exorcist and physician, is named in the various dialects, Janicha, Mangpa, &c.

There are only two religious festivals per annum, one to the Khyimmo or Penate and the other to the sankha or souls of the deceased.

As already said, birth is not attended by any religious observances.

The Kirántis buy their wives, paying usually 25 to 30 rupees, frequently in the shape of copper household utensils. If they have

* The Limbus, like the Lepchas, have an alphabet seemingly original but neither people has made much use of it. I submitted these alphabets to the native and English scholars of Madras, Ava and Arrakan and was told they could not be traced to any Indo-chinese or Dravidian source. I had priorly received a like disclaimer from the Lamas of Tibet.

no means, they go and earn their wife by labour in her father's family. They marry usually at maturity—nay, almost universally so. Divorce can always be had at the pleasure of either party; but if the wife seek it, she or her family must give back the price paid for her, and all the children will remain with the husband in every event of divorce. The marriage ceremony is as follows. The priest takes a cock in his left hand and strikes it on the back with the blunt side of a sickle till blood flows from its mouth. According as the blood marks the ground, the priest prophesies that the offspring will be boys or girls; and if no blood flow, that the marriage will be childless. This is the essence of what passes and it seals the contract.

The Kirántis bury their dead on a hill top, making a tomb of stones loosely constructed. The burial takes place on the day of decease. The priest must attend the funeral and as he moves along with the corpse to the grave he from time to time strikes a copper vessel with a stick, and invoking the soul of the deceased, desires it to go in peace and join the souls that went before it. The law of inheritance gives equal shares to all the sons, and nothing to the daughters, unmarried or married. Concubines are unknown. Polygamy is allowed and not uncommon. Polyandry unheard of and abhorred.

Tattooing is unknown. Boring of ears and nose common with the women; rare with the men. The hair is usually worn long and so as to hide the Hindu-like top knot that is however always forthcoming. The general character of the Kirántis is rather bad among the other tribes who consider them to be somewhat fierce and prompt at quarrelling and blows, especially in their cups,—a state very frequent with them. But at Darjiling they have now for 15 years borne an excellent character as servants, being faithful, truthful and orderly, so that their alleged fierceness should, I think, be called manly independence; or be referred to their long past days of political independence and martial habits.

I proceed now to the physical character of the tribe. Premising that I have long been habituated to these physical observations, by no means confined to the hills, I would repeat once* more that the

* See Preface to my Essay on Kocch Bodo and Dhimal.

Himalayan type, though upon the whole Mongolian, is not to be judged, (any more than the African one by the negro) by the Kalmak exaggeration of that type; and moreover, that the type exhibits here, as to the north and to the south of us, a large range of variation, indicating, like the lingual type, that the Himálaya has been peopled by successive immigrations of northmen belonging to many, probably to all, of the various subfamilies into which the restless progeny of Túr has been (I think prematurely) divided by European philologists and ethnologists. I think, moreover, that I can discern this sort of accord between the physical and lingual types, to wit, that the tribes with simple languages have more, and the tribes with complex languages have less, of the Mongolian physical attributes, after careful elimination of the presumed effects of mixture of breed (and such facts are always notorious on the spot) where such mixture has taken place. Thus, a Lepcha or Gurung or Magar or Murmi to a simple language unites a palpable Mongolian physiognomy and frame, whilst a Kuswar, Dlímalí or a Kiránti with a language much allied to the higher Túrkie, Ugrofinnic and Dravidian type* possesses a face and form tending the same way.

I will now describe my samples, adding, lest I should be supposed to have selected them unfairly, that they are men long in my own service.

Dimensions in English feet and inches.

	(1) <i>Bontawa</i>			(2) <i>Bahing</i>			(3) <i>Thulung</i>		
Total height,	5	4	0	5	0	0	5	2	0
Crown to hip,	2	5	0	2	2	0	2	3	0
Hip to heel,	3	2	0	2	11	0	3	0	0
Fore and aft length of head, ...	0	9	$\frac{1}{8}$	0	8	$\frac{3}{4}$	0	8	$\frac{1}{4}$
Side to side width of Ditto,	0	6	0	0	6	$\frac{1}{4}$	0	6	0
Girth of Ditto,	1	9	$\frac{1}{4}$	1	9	$\frac{1}{2}$	1	8	0
Breadth of face,	0	5	$\frac{1}{8}$	0	5	$\frac{3}{8}$	0	5	$\frac{1}{4}$
Length of arm and hand,	2	5	0	2	3	$\frac{1}{2}$	2	4	0
Girth of arm,	0	10	0	0	9	$\frac{3}{4}$	0	9	$\frac{1}{4}$
Ditto of fore arm,	0	9	$\frac{1}{4}$	0	9	$\frac{3}{4}$	0	10	0

* The complex pronominalization of the Kiránti verb, points to a special connexion with Muller's Munda subdivision.

Girth of thigh,	1	6	0	1	6	0	1	6	$\frac{1}{2}$
Ditto of calf,	1	0	$\frac{1}{2}$	1	0	$\frac{1}{2}$	1	0	$\frac{3}{4}$
Girth of chest,	2	9	$\frac{1}{2}$	2	10	0	2	10	$\frac{1}{2}$

No. 1. A Bontawa, age 55. Head, long, narrow, vertical view elliptic, equally wide fore and aft, widest between the ears. Front view of the head and face oval, with the cheek bones little protruded and the forehead not narrowing upwards. Profile or side view good, nearly vertical, the mouth not being at all inclined to prognathism, and the forehead very little retiring, but chin somewhat defective. Forehead of good height and breadth, nearly as wide as the cheek bones. Eyes of good size, remote; upper lid flaccid, but hardly perceptibly bent down next the nose. Nose, long, straight, pyramidal, well elevated though thick and with the nostrils elongated, not round. Mouth well formed, not protuberant, of good size and having shapely lips and vertical teeth not at all exposed, chin not retiring but not advanced and rather defective. Jaws, neither heavy, nor square. Colour, a clear light brown, deeper and less olive than usual. No trace of ruddiness. Hair jet black, ample, straight, glossy, strong but not coarse. Moustache, full and jet black. No whisker. Eye-brows scanty and horizontal. No hair on chest. Figure good but trunk and arms long, and legs short. Very moderate development of bone or muscle for a highlander, and scarcely more than in a plainsman.

2. A Bahing, 30 years old. Head broader and shorter, vertical view oblate ovoid, wider behind than before, but not flattened behind. Front view of the face shows (like the head,) more breadth than in No. 1, and is somewhat square owing to the projection of the cheek bones and of the angles of the jaws. Profile, vertical as in the last, with very little saliency of the month, a vertical but somewhat narrow forehead, and a chin flush with the front of the jaw. Forehead less fine than in the last, vertical to the front but somewhat narrow or rather seeming so, owing to the lateral projection of the jaws and cheek bones. Eyes of good size remote, showing faintly but distinctly the usual flaccidity and deflexion towards the nose, of the upper lid. Nose, as in the last, long, straight, pyramidal, broad but not depressed. Nostrils large and round. Mouth of good size and shape, with moderately full lips

of which the upper has a tendency to advance more than the lower, owing to the normal thickening of the gum. Teeth fine and vertical and not at all exposed. Chin devoid of the prominent roundness of the part, flush with the jaw in front. Jaws heavy and angular. Colour as in the last, pale ruddy brown, deeper and less dull than the usual isabelline colour. Hair jet black, straight, strong. No whisker. A scanty moustache. Eye-brows full. Chest hairless. No more development of bone or muscle than in the last, and figure, as before, good but noticeable for length of trunk and arms.

No. 3. A Thulung, 22 years old, has the breadth of head and face of the last, vertical view of the head showing great and remarkably uniform width in proportion to length. Profile line vertical, as before, and all the details of the features wonderfully similar, as in a strong family likeness, and figure also and colour.

General remark. All these three men have a depth of colour and defect of bone and muscle assimilating them to the lowland Turanians generally and differencing them from the highlanders generally but especially from the Palusen, the Gurung, the Sunwar, the Murmi, the Magar and the Lepcha; and the Bontawa has a head and face carrying on the resemblance with the lowland Turanians and which I believe to be so frequent among the Kirántis as to deserve to be called the rule, not the exception. In conclusion, I may perhaps be permitted to say, as the result of long years of practised observation that the effect, upon the Turanian northmen, of passing from the cold high and dry plateau of "Asie Centrale," down the various steps of the Himalayan ladder into the hot and moist plains of India is to diminish the volume of bony and muscular development, to diminish also the extreme breadth of head and face with the consequent wide separation of all the double organs of sense and to modify the defects of the eye, giving it a freer and straighter aperture and less flaccid upper lid; moreover, that such tribes as, in the throng of successive immigrations, have been broken, barbarized and driven to seek refuge in malarious tracts, seem to manifest a tendency to pass from the low Turanian to the low African or Negro type;*

* Narrowness of head and face, and projection of mouth are the great marks of the Negro type. Now I have an Uráon in my service in whom these marks

and lastly that, after these effects have been produced in the course of numberless ages, it must always be unsafe to dogmatise upon physiological or philological grounds only respecting the *special* relations and characteristics of any given tribe without abiding advertence to the general relations and characteristics of such tribe, and to the proof of both that may be had by carefully seeking out and weighing all the available evidence, whether physiological or philological, moral or traditional.

The evidence of any reflux towards the north of the great tide of Turanian population flowing wave after wave over India through the numberless passes of the Himalaya, and also perhaps round the Western and Eastern extremities of the chain, is faint, seeming to be confined to the Newar tribe of Nepal Proper, who have a tradition of their return to Nepal after having reached so far south as Malabar. Nor are there wanting coincidences of arbitrary customs, of the shape and use of agricultural and other implements and of words and grammatical forms to countenance and uphold that tradition, as I have already adverted to in my paper on the Nilgirians.

united to a very dark skin are conspicuous and his lips are very thick and his eye good, and his hair crisply curled, but not at all woolly.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
1	29.707	29.781	29.606	0.175	86.9	91.3	81.3	13.0
2	<i>Sunday.</i>							
3	.713	.810	.620	.190	83.6	92.2	75.8	16.4
4	.684	.753	.613	.140	86.0	94.2	79.0	15.2
5	.646	.707	.552	.155	86.7	92.6	81.6	11.0
6	.660	.738	.583	.155	87.4	94.3	82.2	12.1
7	.644	.702	.578	.124	86.5	94.0	79.6	14.4
8	.652	.730	.568	.162	87.3	94.4	81.6	12.8
9	<i>Sunday.</i>							
10	.727	.815	.657	.158	84.6	91.4	80.7	10.7
11	.670	.737	.596	.141	86.0	92.6	80.4	12.2
12	.642	.717	.564	.153	87.3	95.0	81.2	13.8
13	.619	.679	.533	.146	87.3	95.0	81.0	14.0
14	.622	.683	.559	.124	88.1	96.0	82.1	13.9
15	.623	.672	.561	.111	86.3	95.8	79.8	16.0
16	<i>Sunday.</i>							
17	.565	.635	.484	.151	82.9	91.6	78.6	13.0
18	.510	.577	.435	.142	82.0	87.6	79.4	8.2
19	.385	.455	.312	.143	84.2	90.8	79.8	11.0
20	.276	.347	.201	.146	80.7	86.2	78.2	8.0
21	.382	.426	.321	.105	86.1	94.0	78.0	16.0
22	.440	.498	.358	.140	87.7	95.2	83.4	11.8
23	<i>Sunday.</i>							
24	.511	.587	.459	.128	87.4	94.8	79.0	15.8
25	.549	.607	.498	.109	83.9	89.8	78.0	11.8
26	.608	.691	.552	.139	85.0	90.4	81.8	8.6
27	.601	.675	.511	.164	86.6	95.2	79.4	15.8
28	.574	.640	.514	.126	88.0	96.6	82.3	14.3
29	.600	.653	.536	.117	89.8	99.6	83.8	15.8
30	<i>Sunday.</i>							
31	.626	.674	.570	.104	88.2	100.6	82.2	18.4

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight of Vapour required for complete saturation.	Mean degree of Humidity, complete saturation being unity.
					Inches.	T. gr.	T. gr.	
1	79.9	7.0	76.4	10.5	0.893	9.51	3.74	0.72
2	<i>Sunday.</i>							
3	77.4	6.2	74.3	9.3	.835	8.96	.07	.75
4	78.9	7.1	75.3	10.7	.862	9.19	.72	.71
5	80.6	6.1	77.5	9.2	.925	.86	.32	.75
6	80.6	6.8	77.2	10.2	.916	.75	.70	.73
7	78.3	8.2	74.2	12.3	.832	8.87	4.23	.68
8	80.8	6.5	77.5	9.8	.925	9.84	3.57	.73
9	<i>Sunday.</i>							
10	79.2	5.4	76.5	8.1	.896	.59	2.80	.77
11	79.5	6.5	76.2	9.8	.887	.47	3.44	.73
12	80.3	7.0	76.8	10.5	.905	.61	.80	.72
13	80.1	7.2	76.5	10.8	.896	.54	.87	.71
14	80.6	7.5	76.8	11.3	.905	.61	4.11	.70
15	80.0	6.3	76.8	9.5	.905	.63	3.39	.74
16	<i>Sunday.</i>							
17	79.4	3.5	77.6	5.3	.928	.97	1.82	.85
18	79.0	3.0	77.5	4.5	.925	.94	.53	.87
19	79.3	4.9	76.8	7.4	.905	.69	2.55	.79
20	77.5	3.2	75.9	4.8	.879	.47	1.57	.86
21	81.3	4.8	78.9	7.2	.967	10.32	2.63	.80
22	83.3	4.4	81.1	6.6	1.037	11.01	.55	.81
23	<i>Sunday.</i>							
24	82.6	4.8	80.2	7.2	.008	10.73	.72	.80
25	78.7	5.2	76.1	7.8	0.885	9.48	.65	.78
26	80.3	4.7	77.9	7.1	.937	10.02	.51	.80
27	79.2	7.4	75.5	11.1	.868	9.25	3.89	.70
28	80.2	7.8	76.3	11.7	.890	.46	4.22	.69
29	80.9	8.9	76.4	13.4	.893	.47	.95	.66
30	<i>Sunday.</i>							
31	81.5	6.7	78.1	10.1	.943	10.02	3.74	.73

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fah.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	29.601	29.747	29.306	0.441	82.9	86.2	75.8	10.4
1	.588	.736	.283	.453	82.6	86.0	76.6	9.4
2	.572	.718	.272	.446	82.4	85.8	78.8	7.0
3	.570	.712	.262	.450	81.8	85.4	76.4	9.0
4	.583	.725	.255	.470	81.5	84.6	76.4	8.2
5	.581	.729	.266	.463	81.1	84.8	76.8	8.0
6	.603	.755	.284	.471	81.1	85.0	76.6	8.4
7	.618	.770	.296	.474	82.2	86.2	78.0	8.2
8	.635	.798	.302	.496	84.5	89.0	78.6	10.4
9	.646	.815	.298	.517	86.6	90.8	79.6	11.2
10	.640	.808	.297	.511	88.6	93.4	80.2	13.2
11	.625	.787	.288	.499	90.1	96.8	80.1	16.7
Noon.	.606	.763	.272	.491	91.1	98.9	79.4	19.5
1	.586	.735	.248	.487	91.7	100.6	80.6	20.0
2	.561	.697	.212	.485	92.4	100.3	79.0	21.3
3	.539	.680	.201	.479	91.9	99.6	78.6	21.0
4	.521	.657	.208	.449	91.2	99.3	78.7	20.6
5	.522	.657	.231	.426	89.7	97.8	79.5	18.3
6	.532	.690	.254	.436	87.9	96.0	79.3	16.7
7	.553	.710	.278	.432	86.0	89.8	79.7	10.1
8	.571	.731	.279	.452	84.9	88.0	79.6	8.4
9	.595	.748	.338	.410	84.1	86.8	79.0	7.8
10	.608	.736	.345	.391	83.6	85.8	78.2	7.6
11	.606	.763	.331	.432	83.2	85.6	79.2	6.4

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Hour.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Va- pour in a cubic foot of Air.	Additional Weight of Vapour required for complete satu- ration.	Mean degree of Hu- midity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid- night.	79.3	3.6	77.5	5.4	0.925	9.94	1.85	0.84
1	79.2	3.4	77.5	5.1	.925	.94	.74	.85
2	79.0	3.4	77.3	5.1	.919	.88	.73	.85
3	78.6	3.2	77.0	4.8	.910	.79	.61	.86
4	78.2	3.3	76.5	5.0	.896	.65	.66	.85
5	78.0	3.1	76.4	4.7	.893	.62	.55	.86
6	78.2	2.9	76.7	4.4	.902	.72	.45	.87
7	79.0	3.2	77.4	4.8	.922	.91	.63	.86
8	79.8	4.7	77.4	7.1	.922	.87	2.48	.80
9	80.6	6.0	77.6	9.0	.928	.89	3.25	.75
10	81.0	7.6	77.2	11.4	.916	.73	4.19	.70
11	81.4	8.7	77.0	13.1	.910	.63	.91	.66
Noon.	81.6	9.5	76.8	14.3	.905	.55	5.42	.64
1	81.6	10.1	76.5	15.2	.896	.46	.77	.62
2	81.7	10.7	76.3	16.1	.890	.38	6.16	.60
3	81.6	10.3	76.4	15.5	.893	.41	5.91	.61
4	81.2	10.0	76.2	15.0	.887	.37	.65	.62
5	80.5	9.2	75.9	13.8	.879	.30	.07	.65
6	80.1	7.8	76.2	11.7	.887	.43	4.21	.69
7	79.9	6.1	76.8	9.2	.905	.65	3.26	.75
8	79.5	5.4	76.8	8.1	.905	.67	2.82	.77
9	79.6	4.5	77.3	6.8	.919	.84	.37	.81
10	79.6	4.0	77.6	6.0	.928	.95	.08	.83
11	79.3	3.9	77.3	5.9	.919	.86	.03	.83

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1	131.2	..	S.	Scatd. ∩i till 4 P. M. cloudy afterwards.
2	<i>Sunday.</i>	1.84		
3	137.6	..	S.	Cloudy till 5 A. M. cloudless till 10 A. M. Scatd. ∩i till 6 P. M. cloudy afterwards.
4	134.0	..	S. & S. E.	Cloudy till 7 A. M. Scatd. ∩i till 4 P. M. cloudy afterwards, also drizzling at 8 P. M.
5	134.0	..	S.	Cloudless till 5 A. M. Scatd. ∩i afterwards, also thunder and lightning and drizzling at 7 P. M.
6	127.0	..	S. E. & S.	Scatd. clouds.
7	130.4	..	S. & S. E.	Scatd. clouds till 5 P. M. cloudless afterwards.
8	129.0	..	S.	Cloudless till 3 A. M. Scatd. ∩i and ∩i till 5 P. M. cloudless afterwards.
9	<i>Sunday.</i>			
10	129.4	0.13	S. & S. E.	Scatd. clouds nearly the whole day, also raining between Noon and 1 P. M.
11	124.0	..	S.	Scatd. clouds till 7 P. M. cloudless afterwards.
12	134.0	..	S. & S. E.	Cloudless till 6 A. M. Scatd. ∩i afterwards.
13	129.0	..	S.	Cloudless till 7 A. M. Scatd. ∩i and ∩i till 5 P. M. cloudless afterwards.
14	136.0	..	S.	Scatd. clouds till 6 P. M. cloudless afterwards.
15	131.0	..	S. & N.	Cloudless till 7 A. M. Scatd. ∩i and ∩i till 3 P. M. cloudy afterwards, also drizzling at 6 P. M.
16	<i>Sunday.</i>			
17	..	0.79	S. & S. E.	Cloudy, also drizzling between Noon to 5 P. M.
18	..	0.14	E.	Cloudy nearly the whole day, and also raining between 11 A. M. to 1 P. M.
19	..	..	N. & N. E.	Scatd. ∩i till 5 A. M. cloudy afterwards.
20	..	0.23	N. & N. W.	Cloudy and drizzling nearly the whole day.
21	126.4	..	S. & S. W. & N. E.	Cloudy till 2 A. M. Scatd. ∩i afterwards.

∩i Cirri, ∩i Cirro strati, ∩i Cumuli, ∩i Cumulo strati, ∩i Nimbi, —i Strati, ∩i Cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the Month of May, 1858.*

Solar Radiation, Weather, &c.

Date.	Max Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
22	130.5	..	S.	Cloudy the whole day.
23	<i>Sunday.</i>			
24	..	..	S. & S. E.	Cloudy, also very slightly drizzling at 6 A. M.
25	..	0.15	S.	Cloudy, also drizzling from 2 to 7 A. M.
26	..	..	S. E. & S.	Cloudy nearly the whole day.
27	134.8	..	S. W. & S.	Scatd. ∩i and ∪i till 6 P. M. cloudless afterwards.
28	125.9	..	S. & W. & S. W.	Scatd. ∩i and ∩i till 7 P. M. cloudless afterwards.
29	143.6	..	S. & W. & S. E.	Cloudy till 7 A. M. Scatd. ∪i afterwards.
30	<i>Sunday.</i>			
31	127.9	..	S. E.	Scatd. ∩i till 7 A. M. cloudy afterwards, also very slightly drizzling at 2 P. M.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.586
Max. height of the Barometer occurred at 9 A. M. on the 10th,	..	..	29.815
Min. height of the Barometer occurred at 3 P. M. on the 20th,	..	..	29.201
<i>Extreme range</i> of the Barometer during the month,	..	..	0.614
Mean of the Daily Max. Pressures,	..	..	29.653
Ditto ditto Min. ditto,	..	..	29.513
<i>Mean daily range</i> of the Barometer during the month,	..	..	0.140

			°
Mean Dry Bulb Thermometer for the month,	..	..	86.0
Max. Temperature occurred at 1 P. M. on the 31st,	..	..	100.6
Min. Temperature occurred at Midnight on the 3rd,	..	..	75.8
<i>Extreme range</i> of the Temperature during the month,	..	..	24.8
Mean of the daily Max. Temperature,	..	..	93.6
Ditto ditto Min. ditto,	..	..	80.4
<i>Mean daily range</i> of the Temperature during the month,	..	..	13.2

			°
Mean Wet Bulb Thermometer for the month,	..	..	80.0
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer, ..			6.0
Computed Mean Dew-point for the month, ..	..	..	77.0
Mean Dry Bulb Thermometer above computed mean Dew-point, ..			9.0
			Inches.
Mean Elastic force of Vapour for the month,	..	..	0.910

			Troy grains.
Mean Weight of Vapour for the month, ..	..	..	9.71
Additional Weight of Vapour required for complete saturation, ..			3.20
Mean degree of humidity for the month, complete saturation being unity,			0.75

			Inches.
Rained 10 days, Max. fall of rain during 24 hours,	..	..	1.84
Total amount of rain during the month, ..	..	..	3.28
Prevailing direction of the Wind, ..	..	..	.. S. & S. E.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of May, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour when
any particular wind was blowing it rained.

Hour.	N.	Rain on. N. E.	Rain on. E.	Rain on. S. E.	Rain on. S.	Rain on. S. W.	Rain on. W.	Rain on. N. W.	Rain on. Calm.	Rain on. Missed.
	No. of days.									
Midnight.	2	1	1	5	14			1	2	
1	2	1		4	15				4	
2	2	2		6	14	1			1	1
3	2	2		7	14	1			1	
4	2	1		6	15	1				3
5	3	1	1	4	14	1				3
6	4	1		4	17	2				
7	4	1	1	6	13	1	1			
8	3	1	3	2	14	3				
9	2	1	2	3	13	4				
10	2	1		1	15	4		2	1	
11	3	1	1	1	16	2	1			
Noon.	3	2	1	1	14	4	1			
1	2	1	1	4	11	1	3	1		
2	2	1	1	3	13	3	1	1		
3	1			6	11	3	3	1	1	
4	1			5	13	3	2	1	1	
5	1			3	14	1	2	1		
6	1	1		6	12	3	1	1		
7	1	1		2	13	1	1	1	1	
8	1	1		7	14	1	1			
9	1	1		6	14	2				
10		1		7	14	2				
11		1		7	15	2				

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
1	29.602	29.654	29.537	0.117	87.4	101.2	81.6	19.6
2	.547	.601	.476	.125	89.8	99.8	82.6	17.2
3	.518	.573	.454	.119	90.8	102.0	84.4	17.6
4	.509	.578	.444	.134	93.6	105.5	84.8	20.7
5	.502	.575	.435	.140	93.9	105.8	85.2	20.6
6	<i>Sunday.</i>							
7	.465	.512	.382	.130	92.4	101.5	85.7	15.8
8	.505	.547	.444	.103	92.2	100.8	85.9	14.9
9	.534	.592	.481	.111	91.1	101.0	85.8	15.2
10	.528	.574	.446	.128	90.3	96.9	85.6	11.3
11	.505	.548	.441	.107	88.1	97.0	81.6	15.4
12	.492	.544	.406	.138	89.9	98.0	84.8	13.2
13	<i>Sunday.</i>							
14	.541	.618	.488	.130	89.6	96.5	84.2	12.3
15	.595	.617	.531	.116	86.6	90.6	83.2	7.4
16	.590	.633	.541	.092	85.1	96.0	80.0	16.0
17	.547	.600	.477	.123	86.4	94.3	79.9	14.4
18	.527	.586	.462	.124	83.8	93.9	79.3	14.6
19	.515	.576	.442	.134	83.4	90.4	78.5	11.9
20	<i>Sunday.</i>							
21	.450	.514	.375	.139	82.0	85.8	79.4	6.4
22	.449	.512	.403	.109	82.1	86.6	79.0	7.6
23	.527	.597	.484	.113	82.0	85.7	79.0	6.7
24	.587	.638	.539	.099	82.3	86.8	77.8	9.0
25	.592	.639	.537	.102	85.3	92.0	81.0	11.0
26	.586	.639	.517	.122	84.4	91.6	80.2	11.4
27	<i>Sunday.</i>							
28	.511	.544	.467	.077	82.6	87.2	80.3	6.9
29	.524	.558	.486	.072	80.6	89.6	76.7	12.9
30	.545	.583	.502	.081	83.5	89.6	78.6	11.0

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Ther- moneter.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of air.	Additional Weight of Va- pour required for com- plete saturation.	Mean degree of Humi- dity, complete satura- tion being unity.
	°	°	°	°	Inches.	T. gr.	T. gr.	
1	80.6	6.8	77.2	10.2	0.916	9.75	3.70	0.73
2	83.8	6.0	80.8	9.0	1.027	10.87	.55	.75
3	83.4	7.4	79.7	11.1	0.992	.48	4.36	.71
4	80.9	12.7	74.5	19.1	.840	8.83	7.25	.55
5	83.1	10.8	77.7	16.2	.931	9.78	6.44	.60
6	<i>Sunday.</i>							
7	83.7	8.7	79.3	13.1	.979	10.31	5.23	.66
8	84.3	7.9	80.3	11.9	1.011	.65	4.80	.69
9	83.8	7.3	80.1	11.0	.005	.60	.37	.71
10	83.6	6.7	80.2	10.1	.008	.66	3.97	.73
11	82.3	5.8	79.4	8.7	0.983	.43	.29	.76
12	84.0	5.9	81.0	8.9	1.034	.94	.52	.76
13	<i>Sunday.</i>							
14	82.1	7.5	78.3	11.3	0.949	.05	4.28	.70
15	80.7	5.9	77.7	8.9	.931	9.92	3.22	.76
16	79.9	5.2	77.3	7.8	.919	.82	2.75	.78
17	81.3	5.1	78.7	7.7	.961	10.24	.82	.78
18	80.3	3.5	78.5	5.3	.955	.25	1.85	.85
19	79.1	4.3	76.9	6.5	.903	9.72	2.24	.81
20	<i>Sunday.</i>							
21	79.1	2.9	77.6	4.4	.928	.99	1.48	.87
22	78.8	3.3	77.1	5.0	.913	.82	.69	.85
23	78.7	3.3	77.0	5.0	.910	.79	.68	.85
24	79.0	3.3	77.3	5.0	.919	.88	.70	.85
25	80.1	5.2	77.5	7.8	.925	.88	2.76	.78
26	80.5	3.9	78.5	5.9	.955	10.23	.08	.83
27	<i>Sunday.</i>							
28	79.5	3.1	77.9	4.7	.937	.06	1.62	.86
29	78.2	2.4	77.0	3.6	.910	9.81	.20	.89
30	79.5	4.0	77.5	6.0	.925	.92	2.08	.83

All the Hygrometrical elements are computed by the Greenwich Constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Temperature for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
Mid- night.	29.547	29.633	29.464	0.169	83.4	87.7	78.8	8.9
1	.533	.619	.451	.168	83.2	87.2	78.6	8.6
2	.525	.616	.433	.183	83.1	87.2	77.0	10.2
3	.517	.606	.415	.191	82.8	86.7	76.8	9.9
4	.513	.597	.403	.194	82.8	86.4	76.7	9.7
5	.527	.609	.405	.204	82.5	85.9	77.8	8.1
6	.538	.619	.424	.195	82.5	86.4	78.0	8.4
7	.555	.629	.445	.184	83.5	87.5	78.6	8.9
8	.567	.639	.463	.176	85.5	90.4	79.5	10.9
9	.574	.654	.465	.189	87.8	94.0	80.4	13.6
10	.573	.647	.466	.181	89.9	97.2	81.4	15.8
11	.564	.645	.464	.181	91.8	99.6	83.0	16.6
Noon.	.549	.643	.452	.191	92.4	101.8	81.0	20.8
1	.527	.602	.438	.164	92.9	104.4	80.0	24.4
2	.504	.574	.405	.169	93.3	105.6	79.4	26.2
3	.486	.567	.384	.183	92.9	105.8	80.8	25.0
4	.475	.549	.376	.173	91.3	105.3	80.4	24.9
5	.477	.579	.375	.204	89.8	103.6	78.4	25.2
6	.488	.573	.384	.189	87.9	100.1	78.3	21.8
7	.506	.584	.407	.177	86.4	95.6	78.8	16.8
8	.528	.602	.434	.168	85.5	92.9	79.3	13.6
9	.545	.609	.453	.156	84.8	90.9	80.2	10.7
10	.552	.618	.480	.138	84.6	90.0	79.7	10.3
11	.554	.631	.481	.150	84.0	88.6	79.3	9.3

The Mean Height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Hour.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew point.	Dry Bulb above Dew point.	Mean elastic force of Vapour.	Mean Weight of Va- pour in a Cubic foot of Air.	Additional weight of vapour required for complete saturation.	Mean degree of hu- midity, complete satu- ration being unity.
	o	o	o	o	Inches.	Troy grs.	Troy grs.	
Mid- night.	80.2	3.2	78.6	4.8	0.958	10.28	1.68	0.86
1	80.2	3.0	78.7	4.5	.961	.31	.58	.87
2	80.2	2.9	78.7	4.4	.961	.33	.53	.87
3	79.9	2.9	78.4	4.4	.952	.23	.52	.87
4	79.9	2.9	78.4	4.4	.952	.23	.52	.87
5	79.7	2.8	78.3	4.2	.949	.20	.44	.88
6	79.8	2.7	78.4	4.1	.952	.23	.41	.88
7	80.4	3.1	78.8	4.7	.964	.34	.66	.86
8	81.3	4.2	79.2	6.3	.976	.43	2.29	.81
9	82.0	5.8	79.1	8.7	.973	.34	3.26	.76
10	82.5	7.4	78.8	11.1	.964	.21	4.25	.71
11	83.1	8.7	78.7	13.1	.961	.14	5.13	.66
Noon.	82.9	9.5	78.1	14.3	.943	9.93	.61	.64
1	82.8	10.1	77.7	15.2	.931	.80	.97	.62
2	82.6	10.7	77.2	16.1	.916	.63	6.32	.60
3	82.6	10.3	77.4	15.5	.922	.69	.08	.61
4	81.7	9.6	76.9	14.4	.908	.58	4.58	.64
5	81.3	8.5	77.0	12.8	.910	.63	.79	.67
6	81.0	6.9	77.5	10.4	.925	.84	3.80	.72
7	80.8	5.6	78.0	8.4	.940	10.03	.03	.77
8	80.7	4.8	78.3	7.2	.949	.14	2.58	.80
9	80.7	4.1	78.6	6.2	.958	.26	.20	.82
10	80.9	3.7	79.0	5.6	.970	.37	.02	.84
11	80.6	3.4	78.9	5.1	.967	.37	1.80	.85

All the Hygrometrical elements are computed by the Greenwich Constants.

Abstract of the Results of the Hourly Meteorological Observations taken at the Surveyor General's Office, Calcutta, in the month of June, 1858.

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
1	o 140.0	Inches. 0.26	S. & S. E. & E.	Cloudless till 3 A. M. Scatd. ∩i till 3 P. M. cloudy afterwards, also raining at 4 and 6 P. M.
2	140.0	..	S. & S. E.	Scatd. ∩i and ∩i.
3	140.0	..	S.	Cloudless till 10 A. M. Scatd. clouds till 6 P. M. cloudless afterwards.
4	149.0	..	S. E. & S. W.	Cloudy till 6 A. M. cloudless afterwards.
5	144.0	..	S.	Cloudless till 1 P. M. Scatd. ∩i till 7 P. M. cloudless afterwards.
6	<i>Sunday.</i>			
7	144.7	..	S. & N. E.	Cloudless till 8 A. M. Scatd ∩i and ∩i till 3 P. M., cloudy till 8 P. M. cloudless afterwards.
8	142.5	..	S.	Cloudless.
9	142.0	..	S. & S. E.	Cloudless till 5 A. M cloudy till 11 A. M. cloudless till 5 P. M. Scatd. ∩i afterwards.
10	124.2	..	S.	Scatd ∩i till 5 A. M. Scatd. clouds afterwards.
11	125.0	0.32	S. & S. E.	Cloudless till 3 A. M. cloudy afterwards also drizzling between 5 and 6 P. M.
12	135.0	..	S & S. E.	Cloudy the whole day.
13	<i>Sunday.</i>			
14	142.0	..	S. E. & S. & E.	Cloudy till 5 A. M. Scatd. ∩i till 11 A. M. cloudy afterwards.
15	..	..	S. & S. E.	Cloudy the whole day and also slightly drizzling at 4, 6, and 9 A. M.
16	126.0	0.18	S. & S. W.	Scatd. ∩i till 11 A. M. cloudy afterwards also raining at Noon and 6 P. M.
17	..	..	S.	Cloudy till 10 A. M. Scatd. ∩i and ∩i till 3 P. M. cloudy afterwards.
18	..	1.89	S. & S. E.	Cloudless till 3 A. M. cloudy afterwards also raining between 1 to 6 P. M.
19	..	..	S. & N.	Cloudy also slightly raining between 7 and 8 P. M.
20	<i>Sunday.</i>	1.18		
21	..	0.24	N. E. & N. & E.	Cloudy nearly the whole day and also drizzling between 8 A. M. to 1 P. M.
22	..	..	N. E. & S. E. & E.	Cloudy nearly the whole day, also slightly drizzling between 11 A. M. to 1 P. M.
23	..	0.46	S. E. & E.	Cloudy till 6 P. M. Scatd. ∩i and ∩i afterwards, and also raining at Noon.
24	..	0.12	S. & S. E.	Cloudy, and also raining at 2 and 9 A. M.

∩i Cirri, ∩i cirro strati, ∩i cumuli, ∩i cumulo strati, ∩i nimbi, —i strati, ∩i cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
25	120.0	..	S.	Scatd. clouds.
26	..	0.82	S.	Cloudy, and also raining at 4 and 5 A. M. and between 3 and 6 P. M.
27	<i>Sunday.</i>	1.24		
28	..	0.24	S. W. & S.	Cloudy, and also drizzling occasionally between Noon and 9 P. M.
29	..	1.19	S. & S. W.	Cloudy also raining nearly the whole day.
30	..	0.08	S. & S. W.	Scatd. clouds, also raining at 4 A. M.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.530
Max. height of the Barometer, occurred at 9 A. M. on the 1st,	..	..	29.654
Min. height of the Barometer, occurred at 5 P. M. on the 21st,	..	..	29.375
<i>Extreme Range</i> of the Barometer during the month,	..	..	0.279
Mean of the Daily Max. Pressures,	..	..	29.584
Ditto ditto Min. ditto,	..	..	29.469
<i>Mean Daily range</i> of the Barometer during the month,	..	..	0.115

			°
Mean Dry Bulb Thermometer for the month,	..	..	86.9
Max. Temperature, occurred at 3 P. M. on the 5th,	..	..	105.8
Min. Temperature, occurred at 4 A. M. on the 29th,	..	..	76.7
<i>Extreme Range</i> of the Temperature during the month,	..	..	29.1
Mean of the Daily Max. Temperatures,	..	..	94.9
Ditto ditto Min. ditto,	..	..	81.7
<i>Mean Daily range</i> of the Temperatures during the month, ..	..	..	13.2

			°
Mean Wet Bulb Thermometer for the month,	..	..	81.2
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	5.7
Computed Mean Dew Point for the month,	..	..	78.3
Mean Dry Bulb Thermometer above computed Mean Dew Point,	..	..	8.6
			Inches.
Mean Elastic force of vapour for the month, ..	..	..	0.949

			Troy grains.
Mean weight of vapour for the month, ..	..	..	10.09
Additional weight of vapour required for complete saturation,	..	..	3.16
Mean degree of Humidity for the month, complete saturation being unity,	..	..	0.76

			Inches.
Rained 16 days. Max. fall of rain during 24 hours,	..	..	1.89
Total amount of rain during the month, ..	..	..	8.22
Prevailing direction of the Wind, ..	..	..	S. & S. E.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of June, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour,
when any particular wind was blowing, it rained.

Hour.	N.	Rain on.	N. E.	Rain on.	E.	Rain on.	S. E.	Rain on.	S.	Rain on.	S. W.	R. in on.	W.	Rain on.	N. W.	Rain on.	Calm.	Rain on.	Missed.
	No. of days.																		
Midnight.	1		1		2		8		13										1
1	1	1	1		2		5		15								1		1
2	1	1	1		2		6	1	14	1							2		
3			1		2		6		14	1							1		2
4	1		1		2		5		14	4									3
5	1		1		1		8		13	1							1		1
6	1		3		1		5		14	2	2								
7	1		2	1	2		5		12	3					1				
8	1		1	1	4				18	1	2								
9	1		1	1	3		2	1	17	1	2								
10	1		2	1	1		1		17		4								
11			3	1	2	1	1		17		3								
Noon.			2	1	1		3	2	16	1	4	1							
1			2	1		1	2	1	15		5								
2			2		2	1	6		13	1	2					1			
3			1		2		4		15	2	2			1		1			
4			1				5	1	14	1	4	2		2	1				
5			2	1			6	1	14		3	1	1						
6			1		3	1	6	2	12	1	3	3	1						
7	1		1		3		6		12		3	2							
8	1		1		1		5		13	1	3	1					2		
9	1		1		1		4	1	15		3	1					1		
10	1		1		2		3		6		2	1							1
11	1		1		2		3		16		3								

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
1	29.573	29.623	29.519	0.104	85.1	90.3	78.4	11.9
2	.586	.624	.528	.096	85.3	93.1	78.2	14.9
3	.585	.646	.534	.112	85.8	91.8	81.8	10.0
4	<i>Sunday.</i>							
5	.546	.592	.488	.104	84.3	91.4	81.2	10.2
6	.546	.618	.467	.151	85.2	93.7	81.0	12.7
7	.581	.624	.532	.092	84.7	92.0	80.4	11.6
8	.611	.655	.569	.086	84.2	88.6	81.6	7.0
9	.649	.693	.600	.093	84.3	89.6	81.2	8.4
10	.628	.677	.538	.139	85.3	91.8	80.9	10.9
11	<i>Sunday.</i>							
12	.519	.571	.433	.138	84.0	90.0	80.6	9.4
13	.496	.540	.435	.105	83.4	88.2	80.2	8.0
14	.526	.558	.478	.080	81.4	84.8	79.2	5.6
15	.524	.569	.462	.107	83.3	88.0	79.2	8.8
16	.596	.657	.545	.112	81.3	85.9	79.2	6.7
17	.641	.690	.579	.111	83.6	88.8	79.0	9.8
18	<i>Sunday.</i>							
19	.513	.591	.422	.169	84.6	91.2	79.8	11.4
20	.526	.599	.470	.129	83.7	89.8	80.8	9.0
21	.575	.618	.534	.084	83.9	90.8	81.0	9.8
22	.563	.608	.508	.100	82.1	87.8	79.8	8.0
23	.507	.585	.416	.169	79.9	81.8	78.0	3.8
24	.356	.454	.263	.191	81.2	83.4	80.0	3.4
25	<i>Sunday.</i>							
26	.485	.570	.430	.140	82.5	85.4	80.0	5.4
27	.591	.635	.547	.088	84.0	87.6	81.9	5.7
28	.627	.668	.578	.090	84.7	90.5	80.6	9.9
29	.634	.673	.567	.106	85.7	91.2	81.4	9.8
30	.633	.687	.577	.110	86.0	92.0	80.2	11.8
31	.674	.724	.617	.107	82.6	85.5	81.4	4.1

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight of Vapour required for complete saturation.	Mean degree of Humidity, complete saturation being unity.
	°	°	°	°	Inches.	T. gr.	T. gr.	
1	80.9	4.2	78.8	6.3	0.964	10.31	2.26	0.82
2	81.2	4.1	79.1	6.2	.973	.40	.24	.82
3	81.5	4.3	79.3	6.5	.979	.44	.39	.81
4	Sunday.							
5	80.9	3.4	79.2	5.1	.976	.45	1.83	.85
6	81.2	4.0	79.2	6.0	.976	.43	2.18	.83
7	81.0	3.7	79.1	5.6	.973	.40	.02	.84
8	81.0	3.2	79.4	4.8	.983	.51	1.73	.86
9	80.5	3.8	78.6	5.7	.958	.26	2.02	.84
10	81.0	4.3	78.8	6.5	.964	.29	.35	.81
11	Sunday.							
12	80.5	3.5	78.7	5.3	.961	.31	1.86	.85
13	79.8	3.6	78.0	5.4	.940	.09	.87	.84
14	79.0	2.4	77.8	3.6	.934	.05	.22	.89
15	79.4	3.9	77.4	5.9	.922	9.89	2.04	.83
16	79.0	2.3	77.8	3.5	.934	10.05	1.19	.89
17	80.2	3.4	78.5	5.1	.955	.25	.78	.85
18	Sunday.							
19	80.9	3.7	79.0	5.6	.970	.37	2.02	.84
20	80.9	2.7	79.6	4.1	.989	.60	1.47	.88
21	80.7	3.2	79.1	4.8	.973	.42	.71	.86
22	79.8	2.3	78.6	3.5	.958	.30	.21	.90
23	78.5	1.4	77.8	2.1	.934	.09	0.69	.94
24	79.4	1.8	78.5	2.7	.955	.29	.92	.92
25	Sunday							
26	79.4	3.1	77.8	4.7	.934	.03	1.61	.86
27	81.0	3.0	79.5	4.5	.986	.55	.62	.87
28	81.1	3.6	79.3	5.4	.979	.48	.94	.84
29	81.5	4.2	79.4	6.3	.983	.49	2.31	.82
30	81.7	4.3	79.5	6.5	.986	.51	.40	.81
31	80.2	2.4	79.0	3.6	.970	.42	1.26	.89

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	29.585	29.677	29.454	0.223	81.7	83.8	78.2	5.6
1	.573	.669	.442	.227	81.6	83.8	78.3	5.5
2	.559	.655	.397	.258	81.4	84.6	78.6	6.0
3	.551	.649	.393	.256	81.2	84.0	78.4	5.6
4	.546	.654	.390	.264	81.1	83.8	78.5	5.3
5	.557	.668	.404	.264	81.0	83.2	78.4	4.8
6	.574	.681	.405	.276	81.0	83.2	78.0	5.2
7	.586	.697	.407	.290	81.8	84.0	78.4	5.6
8	.599	.703	.402	.301	83.6	86.0	79.2	6.8
9	.605	.717	.419	.298	85.2	87.8	79.8	8.0
10	.606	.724	.408	.316	86.5	89.9	79.6	10.3
11	.597	.718	.394	.324	87.3	90.8	80.2	10.6
Noon.	.583	.696	.374	.322	87.9	91.9	80.0	11.9
1	.562	.695	.342	.353	87.6	92.6	79.4	13.2
2	.540	.658	.309	.349	87.1	93.7	80.9	12.8
3	.524	.639	.295	.344	86.5	92.4	80.8	11.6
4	.511	.617	.263	.354	85.8	90.8	80.2	10.6
5	.517	.633	.273	.360	85.2	88.9	79.8	9.1
6	.524	.641	.273	.368	84.2	87.5	80.2	7.3
7	.543	.645	.283	.362	83.1	86.0	80.4	5.6
8	.565	.670	.291	.379	82.9	85.8	79.8	6.0
9	.586	.673	.303	.370	82.4	84.8	80.2	4.6
10	.598	.698	.313	.385	82.1	84.0	80.2	3.8
11	.598	.704	.310	.294	81.9	83.7	78.4	5.3

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Hour.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Va- pour in a cubic foot of Air.	Additional Weight of Vapour required for complete satu- ration.	Mean degree of Hu- midity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid- night.	79.6	2.1	78.5	3.2	0.955	10.29	1.08	0.91
1	79.6	2.0	78.6	3.0	.958	.32	.02	.91
2	79.4	2.0	78.4	3.0	.952	.25	.02	.91
3	79.3	1.9	78.3	2.9	.949	.22	0.99	.91
4	79.3	1.8	78.4	2.7	.952	.25	.92	.92
5	79.2	1.8	78.3	2.7	.949	.22	.92	.92
6	79.3	1.7	78.4	2.6	.952	.25	.89	.92
7	79.8	2.0	78.8	3.0	.964	.38	1.02	.91
8	80.7	2.9	79.2	4.4	.976	.48	.55	.87
9	81.2	4.0	79.2	6.0	.976	.43	2.18	.83
10	81.8	4.7	79.4	7.1	.983	.47	.63	.80
11	82.1	5.2	79.5	7.8	.986	.49	.92	.78
Noon.	82.3	5.6	79.5	8.4	.986	.49	3.15	.77
1	81.9	5.7	79.0	8.6	.970	.31	.21	.76
2	81.9	5.2	79.3	7.8	.979	.42	2.91	.78
3	81.7	4.8	79.3	7.2	.979	.44	.66	.80
4	81.4	4.4	79.2	6.6	.976	.41	.42	.81
5	80.9	4.3	78.7	6.5	.961	.26	.35	.81
6	80.5	3.7	78.6	5.6	.958	.26	1.98	.84
7	80.0	3.1	78.4	4.7	.952	.21	.65	.86
8	79.8	3.1	78.2	4.7	.946	.15	.64	.86
9	79.8	2.6	78.5	3.9	.955	.27	.34	.89
10	79.6	2.5	78.3	3.8	.949	.20	.31	.89
11	79.6	2.3	78.4	3.5	.952	.23	.21	.89

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1	..	0.26	S.	Cloudy, also raining between 10 and 11 P. M.
2	125.0	..	S.	Scatd. clouds.
3	117.0	..	S.	Scatd. clouds.
4	<i>Sunday.</i>			
5	..	2.38	S. & E.	Cloudy, also raining between 1 and 3 P. M.
6	126.8	..	S. E. & S.	Scatd. clouds till 8 A. M. Scatd. ☾ till 3 P. M. cloudy afterwards also drizzling between 8 and 9 P. M.
7	116.6	0.62	S. E. & S.	Cloudless till 5 A. M. Scatd. ☾ afterwards, also raining between 3 and 4 P. M.
8	115.4	0.26	E. & S. E.	Cloudless till 4 A. M. Scatd. clouds afterwards also raining at 10 A. M. Noon and 5 P. M.
9	..	..	S. & E.	Cloudy, till 5 P. M. cloudless afterwards.
10	124.0	..	S. & E.	Cloudless till 7 A. M. Scatd. ☾ till 3 P. M. cloudy till 7 P. M. cloudless afterwards.
11	<i>Sunday.</i>	0.38		
12	..	0.53	N. E. & E.	Cloudless till 4 A. M. Scatd. ☾ till 9 A. M. cloudy till 4 P. M. Scatd. ☾ and ☾ afterwards also raining at 11 A. M. 1, 4, 7, and 8 P. M.
13	..	1.08	N. E. & E.	Cloudy also raining between Noon and 3 P. M.
14	..	0.16	E.	Cloudy, also drizzling occasionally.
15	..	..	N. E. & S. E.	Cloudy nearly the whole day.
16	..	0.66	E. & S. E.	Cloudy also raining occasionally.
17	..	0.12	S. E. & E.	Scatd. clouds till 7 P. M. Scatd. ☾ afterwards also slightly raining at 2 P. M.
18	<i>Sunday.</i>	0.13		
19	116.0	1.20	E. & S. E. & calm	Scatd. ☾ till 7 A. M. Scatd. ☾ till 3 P. M. cloudy afterwards, also raining between 6 and 10 P. M.
20	..	..	N. E. & S. E.	Cloudy till 5 P. M. Scatd. ☾ afterwards.
21	108.0	0.36	E. & S.	Cloudy till 5 A. M. Scatd. ☾ till 2 P. M. cloudy afterwards also rain at 2 P. M.

☾ Cirri, ☾ Cirro strati, ☾ Cumuli, ☾ Cumulo strati, ☾ Nimbi, —i Strait ☾ Cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the Month of July, 1858.*

Solar Radiation, Weather, &c.

Date.	Max Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
22	..	2.35	N. W. & W.	Cloudy also raining constantly.
23	..	3.04	S. W. & W.	Cloudy also raining between Midnight and Noon, and at 5 P. M.
24	..	1.61	N. & W. & N. E.	Cloudy also raining between 2 and 6 P. M.
25	<i>Sunday.</i>	1.22		
26	..	0.10	S.	Cloudy also raining at Noon.
27	..	0.10	S.	Cloudy also raining at Noon.
28	..	..	S.	Cloudy also very slightly drizzling at 7 P. M.
29	117.0	..	S. & S. W.	Scatd. \searrow i and \swarrow i till 4 P. M. cloudy afterwards.
30	131.0	..	S. & calm.	Cloudy till 8 A. M. Scatd. \swarrow i till 4 P. M. cloudy afterwards also slightly drizzling from 7 to 10 P. M.
31	..	1.40	N. E. & S.	Cloudy also raining at 9 A. M. and 1 P. M.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.566
Max. height of the Barometer occurred at 10 A. M. on the 31st,	..	..	29.724
Min. height of the Barometer occurred at 4 A. M. on the 24th,	..	..	29.263
<i>Extreme range</i> of the Barometer during the month,	..	..	0.461
Mean of the Daily Max. Pressures,	..	..	29.620
Ditto ditto Min. ditto,	..	..	29.505
<i>Mean daily range</i> of the Barometer during the month,	..	..	0.115

			°
Mean Dry Bulb Thermometer for the month,	..	..	83.8
Max. Temperature occurred at 2 P. M. on the 6th,	..	..	93.7
Min. Temperature occurred at 6 A. M. on the 23rd,	..	..	78.0
<i>Extreme range</i> of the Temperature during the month,	..	..	15.7
Mean of the daily Max. Temperature,	..	..	89.1
Ditto ditto Min. ditto,	..	..	80.3
<i>Mean daily range</i> of the Temperature during the month,	..	..	8.8

			°
Mean Wet Bulb Thermometer for the month,	..	..	80.4
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	3.4
Computed Mean Dew-point for the month,	..	..	78.7
Mean Dry Bulb Thermometer above computed mean Dew-point,	..	..	5.1

			Inches.
Mean Elastic force of Vapour for the month,	..	..	0.961

			Troy grains.
Mean Weight of Vapour for the month,	..	..	10.31
Additional Weight of Vapour required for complete saturation,	..	..	1.79
Mean degree of humidity for the month, complete saturation being unity,	..	..	0.85

			Inches.
Rained 25 days, Max. fall of rain during 24 hours,	..	..	3.04
Total amount of rain during the month,	..	..	17.96
Prevailing direction of the Wind,	..	..	S. & E. & S. E.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of July, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour when
any particular wind was blowing it rained.

Hour.	N.	Rain on. N.	E.	Rain on. E.	S.	Rain on. S.	W.	Rain on. W.	N. W.	Rain on. N. W.	Calm.	Rain on. Calm.	Missed.
	No. of days.												
Midnight.													
1		2	1	5	2	5	8	1	1	1		4	1
2		2		5	1	6	8	1	1	1		4	
3		2		5		6	8		1	1		4	
4		2		4		6	7	1	1	1	2	2	3
5	1	2		4		4	9		1	1	2	3	2
6	1	3		8		2	8	2	1	1		2	
7	2	4		6		4	9	1	1	1		1	
8		3		5		6	10	1	1	1		1	
9	1	2		5		7	10	1	1	1		1	
10	2	3	1	4	2	8	9	1	1	1		1	
11		3	2	4		5	10		2				
Noon.													
1	1	3		5	1	2	9	1	4	2	1	1	
2	1	4	3	5	2	2	9	1	3		1	1	
3	1	3	1	5	4	2	11	2	2		1	2	
4	1	3	1	3	1	3	11	1	3		3	2	
5		4		5	1	3	11		5	2			
6	1	4	1	4	2	6	10	1	2	1			
7	2	4	1	7	1	5	9		1	1		1	1
8	2	3	1	8	2	2	8		1	1			
9	1	4	2	7	1	3	10	1		2	1		
10	1	4		7	1	3	10	1		2	1		
11		4	1	7		3	11	1		2			

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11 feet.

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
1	<i>Sunday.</i>							
2	29.663	29.712	29.603	0.109	84.0	88.6	80.2	8.4
3	.616	.666	.510	.126	85.6	92.0	80.6	11.4
4	.590	.650	.523	.127	86.1	92.6	81.8	10.8
5	.534	.590	.451	.139	86.1	92.6	81.8	10.8
6	.467	.537	.392	.145	86.2	91.7	82.0	9.7
7	.450	.495	.402	.093	85.4	90.8	82.2	8.6
8	<i>Sunday.</i>							
9	.425	.468	.357	.111	84.2	89.4	81.7	7.7
10	.454	.501	.408	.093	83.7	88.1	80.6	7.5
11	.536	.605	.477	.128	84.7	89.8	81.7	8.1
12	.585	.621	.510	.081	84.1	89.0	80.6	8.4
13	.629	.689	.587	.102	83.5	87.0	81.2	5.8
14	.684	.735	.618	.117	84.0	88.6	80.6	8.0
15	<i>Sunday.</i>							
16	.586	.641	.530	.111	83.5	87.8	77.6	10.2
17	.614	.661	.566	.095	81.1	83.4	78.4	5.0
18	.589	.633	.530	.103	81.1	86.0	78.6	7.4
19	.579	.624	.522	.102	82.7	88.6	78.8	9.8
20	.583	.637	.513	.114	84.0	89.6	80.3	9.3
21	.521	.576	.417	.159	83.6	89.0	80.6	8.4
22	<i>Sunday.</i>							
23	.528	.576	.464	.112	84.7	89.2	81.6	7.6
24	.535	.613	.496	.117	83.0	85.6	80.6	5.0
25	.590	.631	.528	.103	79.2	79.8	77.8	2.0
26	.534	.588	.463	.125	82.9	89.3	78.8	10.5
27	.535	.590	.467	.123	83.3	88.8	79.7	9.1
28	.562	.629	.512	.117	81.4	84.8	78.4	6.4
29	<i>Sunday.</i>							
30	.563	.614	.496	.118	81.7	85.3	79.6	5.7
31	.567	.640	.511	.129	83.2	88.2	79.4	8.8

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight of Vapour required for complete saturation.	Mean degree of Humidity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
1	<i>Sunday.</i>							
2	80.3	3.7	78.4	5.6	.952	10.19	1.98	.84
3	81.0	4.6	78.7	6.9	.961	.26	2.50	.80
4	81.9	4.2	79.8	6.3	.995	.62	.33	.82
5	82.0	4.1	79.9	6.2	.998	.65	.30	.82
6	81.8	4.4	79.6	6.6	.989	.54	.45	.81
7	81.2	4.2	79.1	6.3	.973	.40	.28	.82
8	<i>Sunday.</i>							
9	81.0	3.2	79.4	4.8	.983	.51	1.73	.86
10	80.4	3.3	78.7	5.0	.961	.31	.76	.85
11	80.4	4.3	78.2	6.5	.946	.11	2.31	.81
12	80.5	3.6	78.7	5.4	.961	.31	1.90	.84
13	80.8	2.7	79.4	4.1	.983	.54	.46	.88
14	80.8	3.2	79.2	4.8	.976	.45	.72	.86
15	<i>Sunday.</i>							
16	80.7	2.8	79.3	4.2	.979	.51	.49	.88
17	78.7	2.4	77.5	3.6	.925	9.96	.21	.89
18	78.5	2.6	77.2	3.9	.916	.87	.30	.88
19	79.6	3.1	78.0	4.7	.940	10.09	.63	.86
20	81.0	3.0	79.5	4.5	.986	.55	.62	.87
21	80.8	2.8	79.4	4.2	.983	.54	.49	.88
22	<i>Sunday.</i>							
23	81.2	3.5	79.4	5.3	.983	.51	.91	.85
24	80.7	2.3	79.5	3.5	.986	.57	.25	.89
25	77.6	1.6	76.8	2.4	.905	9.79	0.77	.93
26	79.2	3.7	77.3	5.6	.919	.86	1.93	.84
27	79.6	3.7	77.7	5.6	.931	.98	.95	.84
28	79.3	2.1	78.2	3.2	.946	10.19	.08	.90
29	<i>Sunday.</i>							
30	78.9	2.8	77.5	4.2	.925	9.96	.41	.88
31	79.0	4.2	76.9	6.3	.908	.74	2.15	.82

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fabs.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	29.574	29.706	29.459	0.247	81.6	84.2	78.2	6.0
1	.562	.690	.412	.248	81.4	84.2	77.8	6.4
2	.552	.682	.434	.248	81.2	84.2	78.8	5.4
3	.541	.672	.416	.256	81.2	83.8	78.8	5.0
4	.534	.672	.417	.255	80.8	83.0	78.6	4.4
5	.546	.680	.420	.260	80.7	83.0	78.6	4.4
6	.563	.698	.443	.255	80.6	82.8	78.4	4.4
7	.575	.705	.443	.262	81.1	83.2	78.6	4.6
8	.592	.727	.449	.278	82.9	85.4	79.8	5.6
9	.600	.734	.461	.273	84.0	87.2	79.8	7.4
10	.603	.735	.455	.280	85.4	88.6	79.6	9.0
11	.595	.730	.447	.283	86.1	89.1	79.6	9.5
Noon.	.580	.715	.429	.286	86.8	90.4	79.6	10.8
1	.559	.704	.421	.283	87.6	91.6	79.6	12.0
2	.533	.667	.401	.266	87.5	92.0	79.8	12.2
3	.514	.663	.376	.287	87.4	92.6	79.6	13.0
4	.502	.639	.357	.282	86.5	91.6	82.0	9.6
5	.501	.618	.364	.254	85.5	91.2	79.8	11.4
6	.514	.635	.374	.261	84.6	87.8	79.7	8.1
7	.534	.652	.394	.258	83.4	86.6	77.9	8.7
8	.558	.661	.420	.241	82.8	85.6	77.6	8.0
9	.578	.688	.440	.248	82.6	85.3	78.2	7.1
10	.588	.689	.447	.242	82.2	85.2	77.6	7.6
11	.587	.693	.456	.237	82.0	84.3	78.6	5.7

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Hour.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Va- pour in a cubic foot of Air.	Additional Weight of Vapour required for complete satu- ration.	Mean degree of Hu- midity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid- night.	79.4	2.2	78.3	3.3	0.949	10.22	1.12	0.90
1	79.2	2.2	78.1	3.3	.943	.16	.11	.90
2	79.2	2.0	78.2	3.0	.946	.19	.02	.91
3	79.2	2.0	78.2	3.0	.946	.19	.02	.91
4	79.0	1.8	78.1	2.7	.943	.16	0.91	.92
5	78.9	1.8	78.0	2.7	.940	.13	.91	.92
6	78.8	1.8	77.9	2.7	.937	.10	.91	.92
7	79.2	1.9	78.2	2.9	.946	.19	.98	.91
8	80.0	2.9	78.5	4.4	.955	.27	1.52	.87
9	80.5	3.5	78.7	5.3	.961	.31	.86	.85
10	81.1	4.3	78.9	6.5	.967	.32	2.36	.81
11	81.4	4.7	79.0	7.1	.970	.35	.60	.80
Noon.	81.9	4.9	79.4	7.4	.983	.47	.74	.79
1	81.9	5.7	79.0	8.6	.970	.31	3.21	.76
2	82.0	5.5	79.2	8.3	.976	.39	.10	.77
3	81.9	5.5	79.1	8.3	.973	.36	.09	.77
4	81.6	4.9	79.1	7.4	.973	.38	2.72	.79
5	81.0	4.5	78.7	6.8	.961	.26	.46	.81
6	80.8	3.8	78.9	5.7	.967	.34	.05	.84
7	80.0	3.4	78.3	5.1	.949	.18	1.78	.85
8	79.9	2.9	78.4	4.4	.952	.23	.52	.87
9	79.9	2.7	78.5	4.1	.955	.27	.41	.88
10	79.7	2.5	78.4	3.8	.952	.23	.31	.89
11	79.7	2.3	78.5	3.5	.955	.27	.20	.90

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1 <i>Sunday.</i>	0.13			
2 ..	..	..	S.	Scatd. \i and \i till 6 A. M. Scatd. clouds till 8 P. M. cloudless afterwards.
3 135.2	..	..	S. & S. E.	Cloudless till 7 A. M. Scatd. \i and \i till 8 P. M. cloudless afterwards.
4 135.0	0.16	..	S. E. & S. & calm.	Cloudless till 3 A. M. Scatd. \i till 8 P. M. cloudless afterwards, also slightly drizzling at 8 P. M.
5 132.0	..	..	S. & S. E.	Cloudless till 3 A. M. Scatd. \i and \i till 5 P. M. cloudy afterwards, also slightly drizzling at Noon and 6 P. M.
6 113.8	..	..	S. E. & calm.	Cloudless till 6 A. M. cloudy till 3 P. M. Scatd. \i and \i afterwards.
7 124.3	..	..	N. E. & calm & E.	Cloudless till 7 A. M. Scatd. \i and \i afterwards, also drizzled at 4 P. M.
8 <i>Sunday.</i>	0.22			
9 ..	0.22	..	N. E. & E.	Scatd. \i till 7 A. M. cloudy afterwards, also rained at Noon, 1 and 5 P. M.
10 ..	0.16	..	S. & N. E.	Cloudless till 3 A. M. cloudy afterwards also drizzling between 10 and 11 A. M.
11 ..	..	..	E. & S. & S. E.	Cloudy till 5 P. M. Scatd. \i and \i afterwards, also drizzled at 11 A. M. and 4 P. M.
12 ..	0.27	..	S. E. & S. & E.	Cloudy, also raining between 9 and 10 A. M.
13 119.0	0.30	..	S. E. & E.	Cloudy, also drizzling occasionally.
14 114.8	0.71	..	S. & S. E.	Scatd. clouds also rained at 4 P. M.
15 <i>Sunday.</i>	0.07			
16 ..	0.07	..	S. & S. E.	Cloudy, also thundering and lightning and raining after sunset.
17 ..	2.47	..	S. W. & S. & W.	Cloudy, also incessantly drizzling the whole day.
18 ..	1.36	..	S. W. & W.	Cloudy, also raining between 4 & 9 P. M.
19 ..	..	..	S. W. & W.	Cloudy the whole day also very slightly drizzled at 1 A. M.

\i Cirri, \i Cirro strati, \i Cumuli, \i Cumulo strati, \i Nimbi, —i Strait, \i Cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the Month of August, 1858.*

Solar Radiation, Weather, &c.

Date.	Max Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
20	..	0.36	W. & S. W. & N. W.	Cloudy, also drizzling between 7 and 9 A. M.
21	..	0.16	S. W. & S. & N. W.	Cloudy and also drizzling occasionally.
22	<i>Sunday.</i>			
23	..	..	S. & S. E.	Scatd. clouds and also very slightly drizzling at 10 P. M.
24	..	0.69	S. W. & S. & W.	Cloudy and also drizzling constantly.
25	..	3.16	W. & S. W.	Cloudy and also raining and drizzling the whole day.
26	..	0.22	S. & S. W.	Cloudy and also drizzling between Midnight and 1 A. M. and at 11 P. M.
27	..	1.26	W. & S.	Cloudy and also raining at 7 P. M.
28	..	0.14	S. E. & W.	Cloudy and also drizzling occasionally.
29	<i>Sunday.</i>	2.56		
30	..	0.25	S. & E. & S. E.	Cloudy and also drizzling occasionally.
31	124.0		S. E. & S. W. & S.	Scatd. \searrow i and \swarrow i till 7 P. M. cloudless afterwards.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.558
Max. height of the Barometer occurred at 10 A. M. on the 14th,	..	..	29.735
Min. height of the Barometer occurred at 4 P. M. on the 9th,	..	..	29.357
<i>Extreme range</i> of the Barometer during the month,	..	..	0.378
Mean of the daily Max. Pressures,	..	..	29.613
Ditto ditto Min. ditto,	..	..	29.497
<i>Mean daily range</i> of the Barometer during the month,	..	..	0.116

			°
Mean Dry Bulb Thermometer for the month,	..	..	83.6
Max. Temperature occurred at 3 P. M. on the 4th and 5th,	..	..	92.6
Min. Temperature occurred at 8 and 10 P. M. on the 16th,	..	..	77.6
<i>Extreme range</i> of the Temperature during the month,	..	..	15.0
Mean of the daily Max. Temperatures,	..	..	88.3
Ditto ditto Min. ditto,	..	..	80.2
<i>Mean daily range</i> of the Temperatures during the month,	..	..	8.1

			°
Mean Wet Bulb Thermometer for the month,	..	..	80.3
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	3.3
Computed Mean Dew-point for the month,	..	..	78.6
Mean Dry Bulb Thermometer above computed mean Dew-point,	..	..	5.0
			Inches.
Mean Elastic force of Vapour for the month,	..	..	0.958

			Troy grains.
Mean Weight of Vapour for the month,	..	..	10.28
Additional Weight of Vapour required for complete saturation,	..	..	1.75
Mean degree of humidity for the month, complete saturation being unity,	..	..	0.86

			Inches.
Rained 24 days, Max. fall of rain during 24 hours,	..	..	3.16
Total amount of rain during the month,	..	..	14.65
Prevailing direction of the Wind,	..	..	... S. & S. E.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of August, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour when
any particular wind was blowing it rained.

Hour.	N.	Rain on. N. E.	Rain on. E.	Rain on. S. E.	Rain on. S.	Rain on. S. W.	Rain on. W.	Rain on. N. W.	Rain on. Calm.	Rain on. Missed.
	No. of days.									
Midnight.		1	2	4	8	3	3	2	4	1
1		1	2	1	4	1	4	1	4	
2		1	2	4	1	10	2	1	3	1
3		1	2	4	1	9	3	1	4	2
4		1	2	1	3	8	3	1	3	4
5		2	2	5	2	8	4	1	1	
6		2	2	5	6	6	5	1	1	
7		1	5	6	2	5	3	5	1	
8		1	6	3	5	6	1	3	1	
9	1	1	4	4	1	6	4	1	5	2
10	1	1	2	1	4	1	8	2	4	1
11	2	1	1	6	2	6	1	5	2	3
Noon.	1	2	1	6	1	4	1	8	2	2
1		3	1	9	1	4	1	4	1	2
2		4	1	7	4	6	1	6	2	2
3		3	2	4	6	7	4	1	3	1
4		2	1	7	1	6	1	5	3	2
5		2	1	6	7	3	2	4	1	1
6		2	2	5	1	8	3	3	1	2
7		2	1	4	9	2	4	3	3	1
8		2	3	4	1	10	1	3	2	1
9		1	3	1	5	10	2	1	3	1
10		1	3	1	5	1	10	3	2	1
11		1	2	7	10	3	2	3	3	1

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
1	29.668	29.718	29.625	0.093	83.8	88.6	79.4	9.2
2	.704	.763	.647	.116	84.9	90.6	80.4	10.2
3	.695	.772	.628	.144	85.2	90.6	81.6	9.0
4	.644	.708	.554	.154	85.1	89.6	81.4	8.2
5	<i>Sunday.</i>							
6	.609	.670	.548	.122	84.3	89.6	80.0	9.6
7	.670	.722	.599	.123	86.0	93.6	81.5	12.1
8	.687	.743	.613	.130	85.7	92.8	82.4	10.4
9	.691	.754	.627	.127	85.4	90.8	81.6	9.2
10	.729	.782	.656	.126	85.5	91.8	81.4	10.4
11	.717	.795	.643	.152	85.2	91.4	81.8	9.6
12	<i>Sunday.</i>							
13	.558	.616	.466	.150	88.1	95.0	83.2	11.8
14	.527	.588	.440	.148	89.1	95.0	84.6	10.4
15	.589	.676	.533	.143	82.1	85.4	79.0	6.4
16	.737	.797	.637	.160	83.3	88.5	78.8	9.7
17	.755	.817	.674	.143	83.2	89.9	80.2	9.7
18	.691	.760	.609	.151	83.5	88.6	80.6	8.0
19	<i>Sunday.</i>							
20	.584	.643	.504	.139	83.8	88.8	80.2	8.6
21	.597	.651	.539	.112	82.4	86.0	79.8	6.2
22	.656	.741	.593	.148	82.8	87.6	80.0	7.6
23	.734	.805	.679	.126	84.2	89.0	80.4	8.6
24	.755	.825	.696	.129	81.8	84.8	80.2	4.6
25	.758	.818	.691	.127	80.0	82.4	79.0	3.4
26	<i>Sunday.</i>							
27	.774	.846	.708	.138	79.8	83.1	78.0	5.1
28	.794	.851	.739	.112	81.0	86.3	78.0	8.3
29	.829	.892	.768	.124	82.7	86.8	79.2	7.6
30	.786	.847	.695	.152	82.7	87.0	79.5	7.5

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Date.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of air.	Additional Weight of Va- pour required for com- plete saturation.	Mean degree of Humi- dity, complete satura- tion being unity.
	°	°	°	°	Inches.	T. gr.	T. gr.	
1	80.2	3.6	78.4	5.4	0.952	10.21	1.89	0.84
2	80.8	4.1	78.7	6.2	.961	.29	2.20	.82
3	80.8	4.4	78.6	6.6	.958	.23	.38	.81
4	81.5	3.6	79.7	5.4	.992	.61	1.96	.84
5	<i>Sunday.</i>							
6	81.1	3.2	79.5	4.8	.986	.55	.73	.86
7	81.8	4.2	79.7	6.3	.992	.59	2.32	.82
8	81.6	4.1	79.5	6.2	.986	.53	.27	.82
9	80.9	4.5	78.6	6.8	.958	.23	.45	.81
10	81.1	4.4	78.9	6.6	.967	.32	.40	.81
11	81.4	3.8	79.5	5.7	.986	.53	.08	.84
12	<i>Sunday.</i>							
13	83.2	4.9	80.7	7.4	1.024	.89	.83	.79
14	83.8	5.3	81.1	8.0	.037	.99	3.13	.78
15	78.7	3.4	77.0	5.1	0.910	9.79	1.72	.85
16	80.0	3.3	78.3	5.0	.949	10.18	.75	.85
17	80.2	3.0	78.7	4.5	.961	.31	.58	.87
18	80.6	2.9	79.1	4.4	.973	.45	.55	.87
19	<i>Sunday.</i>							
20	80.9	2.9	79.4	4.4	.983	.54	.56	.87
21	80.1	2.3	78.9	3.5	.967	.39	.22	.90
22	80.3	2.5	79.0	3.8	.970	.42	.33	.89
23	80.7	3.5	78.9	5.3	.967	.37	.87	.85
24	79.1	2.7	77.7	4.1	.931	.02	.38	.88
25	77.7	2.3	76.5	3.5	.896	9.67	.14	.90
26	<i>Sunday.</i>							
27	77.9	1.9	76.9	2.9	.908	.80	0.95	.91
28	78.5	2.5	77.2	3.8	.916	.87	1.27	.89
29	79.7	3.0	78.2	4.5	.946	10.15	.57	.87
30	79.4	3.3	77.7	5.0	.931	.00	.72	.85

All the Hygrometrical elements are computed by the Greenwich Constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Temperature for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	29.702	29.834	29.540	0.294	82.0	85.8	78.6	7.2
1	.689	.821	.543	.278	81.7	85.6	78.3	7.3
2	.681	.812	.537	.275	81.4	85.0	78.0	7.0
3	.668	.809	.531	.278	81.4	84.8	78.0	6.8
4	.663	.798	.532	.266	81.0	84.7	78.1	6.6
5	.679	.810	.537	.273	81.2	84.6	78.2	6.4
6	.698	.823	.547	.276	80.9	84.8	78.0	6.8
7	.716	.845	.561	.284	81.2	85.4	78.8	6.6
8	.733	.881	.581	.300	83.3	88.2	79.2	9.0
9	.742	.892	.588	.304	84.3	89.0	77.0	12.0
10	.745	.890	.581	.309	85.5	91.0	79.0	12.0
11	.734	.871	.577	.294	86.7	91.5	79.4	12.1
Noon.	.714	.855	.555	.300	87.7	92.8	80.2	12.6
1	.686	.833	.524	.309	88.1	93.4	81.4	12.0
2	.658	.789	.487	.302	88.1	94.2	81.0	13.2
3	.636	.775	.456	.319	87.7	95.0	81.4	13.6
4	.626	.768	.452	.316	86.7	95.0	79.8	15.2
5	.629	.769	.440	.329	85.6	93.6	79.2	14.4
6	.640	.779	.452	.327	84.4	92.0	79.0	13.0
7	.662	.811	.468	.343	83.5	91.0	79.8	11.2
8	.686	.843	.505	.338	83.3	90.0	79.6	10.4
9	.709	.861	.524	.337	82.8	89.2	79.4	9.8
10	.721	.861	.559	.302	82.5	87.0	79.2	7.8
11	.720	.852	.551	.301	82.3	86.4	79.0	7.4

The Mean Height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Hour.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew point.	Dry Bulb above Dew point.	Mean elastic force of Vapour.	Mean Weight of Va- pour in a Cubic foot of Air.	Additional weight of vapour required for complete saturation.	Mean degree of hu- midity, complete satu- ration being unity.
	o	o	o	o	Inches.	Troy grs.	Troy grs.	
Mid- night.	79.7	2.3	78.5	3.5	0.955	10.27	1.20	0.90
1	79.6	2.1	78.5	3.2	.955	.29	.08	.91
2	79.5	1.9	78.5	2.9	.955	.29	0.98	.91
3	79.5	1.9	78.5	2.9	.955	.29	.98	.91
4	79.3	1.7	78.4	2.6	.952	.25	.89	.92
5	79.4	1.8	78.5	2.7	.955	.29	.92	.92
6	79.2	1.7	78.3	2.6	.949	.22	.88	.92
7	79.5	1.7	78.6	2.6	.958	.32	.89	.92
8	80.5	2.8	79.1	4.2	.973	.45	1.48	.88
9	80.8	3.5	79.0	5.3	.970	.40	.88	.85
10	81.1	4.4	78.9	6.6	.967	.32	2.40	.81
11	81.5	5.2	78.9	7.8	.967	.30	.88	.78
Noon.	81.7	6 0	78.7	9.0	.961	.22	3.34	.75
1	81.9	6 2	78.8	9.3	.964	.25	.47	.75
2	81.9	6.2	78.8	9.3	.964	.25	.47	.75
3	81.9	5.8	79.0	8.7	.970	.31	.25	.76
4	81.4	5.3	78.7	8.0	.961	.24	2.94	.78
5	81.1	4.5	78.8	6.8	.964	.29	.47	.81
6	80.6	3.8	78.7	5.7	.961	.29	.02	.84
7	80.4	3.1	78.8	4.7	.964	.34	1.66	.86
8	80.3	3.0	78.8	4.5	.964	.34	.59	.87
9	80.2	2.6	78.9	3 9	.967	.39	.36	.88
10	80.1	2.4	78.9	3.6	.967	.39	.25	.89
11	79.9	2.4	78 7	3.6	.961	.33	.25	.89

All the Hygrometrical elements are computed by the Greenwich Constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1	..	0.21	E. & S. E.	Scatd clouds and also raining at 7 A. M. and 6 P. M.
2	..	..	S. & E.	Cloudless till 4 A. M. Scatd clouds afterwards.
3	130.5	..	S. & S. W.	Scatd clouds and also very slightly drizzling at 8 A. M.
4	..	0.12	S.	Cloudless till 6 A. M. cloudy till 6 P. M. cloudless afterwards, also raining between 2 and 3 P. M.
5	<i>Sunday.</i>			
6	..	0.65	S. W. & S. & E.	Scatd \i and \i till 5 A. M. cloudy afterwards also raining at 6 P. M.
7	134.4	..	S. & N. E.	Scatd clouds nearly the whole day.
8	130.8	..	N. E. & S. E.	Cloudless till 3 A. M. Scatd clouds till 7 P. M. cloudless afterwards also very slightly drizzled at 5 P. M.
9	130.8	..	N. E. & Calm	Cloudless till 7 A. M. Scatd \i and \i afterwards.
10	134.2	0.52	N. E. & E.	Cloudless till 6 A. M. Scatd clouds till 6 P. M. cloudless afterwards, also raining between 3 and 4 P. M.
11	..	..	S. E. & S.	Cloudless till 2 A. M. Scatd clouds till 6 P. M. cloudless afterwards also very slightly drizzled at 3 P. M.
12	<i>Sunday.</i>			
13	136.0	..	N. W. & S. E. & S.	Cloudless till 5 A. M. Scatd clouds afterwards, also slightly drizzling at 7 P. M.
14	123.7	..	N. W. & calm	Cloudless till 6 A. M. Scatd clouds afterwards also slightly drizzled between 7 and 8 P. M.
15	..	0.54	N. E.	Cloudy, also drizzling between 3 & 8 P. M.
16	129.0	..	E. & S. E.	Scatd clouds.
17	139.5	0.11	E. & S.	Cloudless till 5 A. M. Scatd clouds afterwards also raining between 3 and 4 P. M.
18	..	0.21	N. E. & E.	Cloudy nearly the whole day also drizzling between 1 and 2 P. M.
19	<i>Sunday.</i>	0.16		
20	..	0.48	N. E. & S.	Scatd clouds also drizzling occasionally.
21	..	0.42	E.	Cloudy nearly the whole day also raining at 7 P. M.
22	..	..	N. E. & S.	Cloudy till 7 P. M. Scatd \i and \i

\i Cirri, \i cirro strati, \i cumuli, \i cumulo strati, \i nimbi, —i strati, \i cirro cumuli.

Meteorological Observations.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	0	Inches.		
23	..	..	S. E. & E. & S.	afterwards also drizzling at 7 A. M. and 7 P. M. Scatd \i & \i till 5 P. M. cloudless afterwards.
24	..	..	S. E. & N. E.	Cloudy also slightly drizzling between 2 and 3 P. M.
25	..	0.52	E. & S. E.	Scatd clouds also raining at 8 and 10 A. M. and 1 P. M.
26	<i>Sunday.</i>	0.18		
27	..	0.26	E. & S. & S. E.	Cloudy, also drizzling between 7 & 11 A. M.
28	..	0.36	S. & S. E. & E.	Scatd clouds also raining between 8 and 9 A. M.
29	..	..	S. & S. E.	Scatd clouds also very slightly drizzling at 10 A. M.
30	..	..	S.	Scatd clouds.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.689
Max. height of the Barometer, occurred at 9 A. M. on the 29th,	..	..	29.892
Min. height of the Barometer, occurred at 5 P. M. on the 14th,	..	..	29.440
<i>Extreme Range</i> of the Barometer during the month,	..	..	0.452
Mean of the Daily Max. Pressures,	..	..	29.754
Ditto ditto Min. ditto,	..	..	29.620
<i>Mean Daily range</i> of the Barometer during the month,	..	..	0.134

			°
Mean Dry Bulb Thermometer for the month,	..	..	83.9
Max. Temperature, occurred at 3 and 4 P. M. on the 13th and 14th,	..	..	95.0
Min. Temperature, occurred at 2, 3 and 6 A. M. on the 27th and 28th,	..	..	78.0
<i>Extreme Range</i> of the Temperature during the month,	..	..	17.0
Mean of the Daily Max. Temperature,	..	..	88.9
Ditto ditto Min. ditto,	..	..	80.5
<i>Mean Daily range</i> of the Temperature during the month,	..	..	8.4

			°
Mean Wet Bulb Thermometer for the month,	..	..	80.5
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	3.4
Computed Mean Dew Point for the month,	..	..	78.8
Mean Dry Bulb Thermometer above computed Mean Dew Point,	..	..	5.1
			Inches.
Mean Elastic force of vapour for the month,	..	..	0.964

			Troy grains.
Mean weight of vapour for the month,	..	..	10.34
Additional weight of vapour required for complete saturation,	..	..	1.79
Mean degree of Humidity for the month, complete saturation being unity,	..	..	0.85

			Inches.
Rained 22 days. Max. fall of rain during 24 hours,	..	..	0.65
Total amount of rain during the month,	..	..	4.74
Prevailing direction of the Wind,	..	.. S. & S. E. & N. E.	

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of September, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour,
when any particular wind was blowing, it rained.

Hour.	N.	Rain on. N.	E.	Rain on. E.	S.	Rain on. S.	W.	Rain on. W.	N. W.	Rain on. N. W.	Calm.	Rain on. Calm.	Missed.
	No. of days.												
Midnight.													
1		5	6	6	6	1							1
2		5	6	5	8	1							
3		4	6	3	8								
4		4	8	2	7								
5		4	7	5	7								
6		4	7	5	6	1		1					
7		5	8	1	5	1		1					
8		8	5	3	4	1	1	1		1			
9	1	6	8	1	6	1	1	1		2			2
10	2	5	4	1	5	2	2			3			1
11	1	4	7	5	5	1	1	1		2			
Noon.													
1	1	4	7	5	5	1			3				
2	1	3	6	7	6	1	1		2				
3	2	3	5	8	5	1	1		2				
4	2	5	3	8	6	1	1		1				
5	3	5	1	6	8	1	1		2	1			
6	1	4	3	4	1	1			1				
7	1	5	2	4	4			2	1				
8	1	2	7	1	4	1	1	1	1				
9		3	8	1	4				1	1	1		
10		3	7	5	5			1	1	1		1	
11		3	7	5	5		1		1	1		1	

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11 feet.

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
1	29.746	29.804	29.679	0.125	81.1	84.8	78.6	6.2
2	.785	.848	.728	.120	81.9	87.2	78.2	9.0
3	<i>Sunday.</i>							
4	.835	.895	.786	.109	83.2	89.6	79.8	9.8
5	.841	.914	.766	.148	83.7	88.8	79.9	8.9
6	.806	.887	.739	.148	84.0	89.6	79.8	9.8
7	.774	.850	.706	.144	84.5	90.2	80.3	9.9
8	.801	.868	.738	.130	85.3	90.6	80.6	10.0
9	.832	.910	.777	.133	85.3	90.6	80.6	10.0
10	<i>Sunday.</i>							
11	.839	.898	.781	.117	84.8	90.6	80.4	10.2
12	.856	.919	.809	.110	83.5	89.8	77.8	12.0
13	.867	.941	.815	.126	83.3	89.8	77.6	12.2
14	.867	.947	.802	.145	83.9	90.4	77.6	12.8
15	.833	.906	.750	.156	83.6	89.0	79.0	10.0
16	.793	.869	.731	.138	81.7	88.7	78.8	9.9
17	<i>Sunday.</i>							
18	.850	.913	.800	.113	80.1	88.4	74.3	14.1
19	.857	.933	.800	.133	77.8	87.4	69.2	18.2
20	.855	.911	.797	.144	78.9	87.6	71.2	16.4
21	.858	.930	.794	.136	80.6	89.0	73.8	15.2
22	.867	.937	.800	.137	81.1	89.6	74.0	15.6
23	.817	.891	.748	.143	81.1	89.2	74.0	15.2
24	<i>Sunday.</i>							
25	.605	.721	.459	.262	76.4	79.8	74.2	5.6
26	.646	.874	.291	.583	74.2	77.4	71.6	5.8
27	.904	.977	.845	.132	77.7	85.8	69.8	16.0
28	.917	.990	.870	.120	79.8	85.9	75.6	10.3
29	.909	.970	.868	.102	78.5	84.7	73.6	11.1
30	.974	30.049	.913	.136	76.7	83.6	71.0	12.6
31	<i>Sunday.</i>							

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Thermo- meter.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight of Va- pour required for com- plete saturation.	Mean degree of Humidity, complete saturation be- ing unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
1	78.8	2.3	77.6	3.5	0.928	9.99	1.18	0.89
2	79.2	2.7	77.8	4.1	.934	10.05	.39	.88
3	<i>Sunday.</i>							
4	79.1	4.1	77.0	6.2	.910	9.77	2.12	.82
5	79.7	4.0	77.7	6.0	.931	.98	.09	.83
6	79.8	4.2	77.7	6.3	.931	.98	.19	.82
7	79.7	4.8	77.3	7.2	.919	.84	.51	.80
8	80.7	4.6	78.4	6.9	.952	10.17	.47	.81
9	80.1	5.2	77.5	7.8	.925	9.88	.76	.78
10	<i>Sunday.</i>							
11	78.5	6.3	75.3	9.5	.862	.21	3.25	.74
12	76.5	7.0	73.0	10.5	.801	8.57	.43	.71
13	77.2	6.1	74.1	9.2	.830	.91	.02	.75
14	77.6	6.3	74.4	9.5	.838	.97	.16	.74
15	78.0	5.6	75.2	8.4	.860	9.22	2.81	.77
16	77.4	4.3	75.2	6.5	.860	.24	.13	.81
17	<i>Sunday.</i>							
18	71.8	8.3	67.6	12.5	.672	7.25	3.56	.67
19	68.4	9.4	63.7	14.1	.591	6.41	.72	.63
20	71.4	7.5	67.6	11.3	.672	7.28	.19	.70
21	73.5	7.1	69.9	10.7	.725	.80	.21	.71
22	73.8	7.3	70.1	11.0	.729	.85	.32	.70
23	74.1	7.0	70.6	10.5	.741	.97	.20	.71
24	<i>Sunday.</i>							
25	74.3	2.1	73.2	3.2	.806	8.77	0.95	.90
26	71.6	2.6	70.3	3.9	.734	.02	1.07	.88
27	74.1	3.6	72.3	5.4	.783	.49	.61	.84
28	75.4	4.4	73.2	6.6	.806	.70	2.05	.81
29	73.3	5.2	70.7	7.8	.744	.05	.30	.78
30	70.7	6.0	67.7	9.0	.674	7.33	.47	.75
31	<i>Sunday.</i>							

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	29.824	29.937	29.349	0.588	78.5	82.2	71.6	10.6
1	.810	.926	.329	.597	78.1	82.0	71.3	10.7
2	.801	.924	.310	.614	77.8	81.7	71.0	10.7
3	.796	.913	.291	.622	77.3	81.6	71.0	10.6
4	.798	.934	.341	.593	76.9	81.3	69.8	11.5
5	.810	.946	.393	.553	76.8	80.8	69.8	11.0
6	.837	.974	.521	.453	76.5	80.6	69.2	11.4
7	.859	30.003	.597	.406	77.1	81.8	70.6	11.2
8	.896	.029	.696	.333	80.8	85.6	76.2	9.4
9	.898	.043	.682	.361	81.9	86.0	73.6	12.4
10	.896	.049	.689	.360	83.0	87.0	74.2	12.8
11	.881	.023	.678	.345	84.5	89.2	74.4	14.8
Noon.	.857	.001	.654	.347	85.7	90.2	73.6	16.6
1	.831	29.982	.636	.316	86.3	89.8	75.0	14.8
2	.803	.950	.573	.377	86.9	90.6	75.4	15.2
3	.787	.948	.539	.409	87.0	90.6	75.6	15.0
4	.780	.941	.528	.413	86.2	90.6	75.0	15.6
5	.783	.943	.507	.436	84.8	89.2	75.0	14.2
6	.789	.955	.505	.450	83.0	87.0	74.4	12.6
7	.809	.966	.513	.453	81.7	86.0	73.2	12.8
8	.827	.984	.518	.466	80.8	85.5	72.8	12.7
9	.838	.996	.496	.500	80.0	84.6	72.6	12.0
10	.843	30.002	.462	.540	79.4	83.7	72.0	11.7
11	.841	.005	.459	.546	79.0	83.4	71.6	11.8

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon. (Continued.)

Hour.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Va- pour in a cubic foot of Air.	Additional Weight of Vapour required for complete satu- ration.	Mean degree of Hu- midity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid- night.	75.4	3.1	73.8	4.7	0.822	8.89	1.46	0.86
1	75.3	2.8	73.9	4.2	.824	.94	.28	.88
2	74.9	2.9	73.4	4.4	.811	.80	.33	.87
3	74.6	2.7	73.2	4.1	.806	.75	.23	.88
4	74.2	2.7	72.8	4.1	.795	.64	.22	.88
5	74.2	2.6	72.9	3.9	.797	.66	.17	.88
6	73.9	2.6	72.6	3.9	.790	.59	.16	.88
7	74.5	2.6	73.2	3.9	.806	.75	.17	.88
8	76.0	4.8	73.6	7.2	.817	.80	2.27	.80
9	76.2	5.7	73.3	8.6	.809	.68	6.7	.76
10	76.2	6.8	72.8	10.2	.795	.54	3.28	.72
11	76.8	7.7	72.9	11.6	.797	.52	.83	.69
Noon.	77.0	8.7	72.6	13.1	.790	.43	4.37	.66
1	77.2	9.1	72.6	13.7	.790	.42	.60	.65
2	77.6	9.3	72.9	14.0	.797	.49	.76	.64
3	77.2	9.8	72.3	14.7	.783	.32	.97	.63
4	77.0	9.2	72.4	13.8	.785	.36	.63	.64
5	77.0	7.8	73.1	11.7	.803	.58	3.88	.69
6	77.2	5.8	74.3	8.7	.835	.96	2.86	.76
7	76.8	4.9	74.3	7.4	.835	.99	.38	.79
8	76.2	4.6	73.9	6.9	.824	.88	.19	.80
9	76.0	4.0	74.0	6.0	.827	.93	1.88	.83
10	75.7	3.7	73.8	5.6	.822	.87	.75	.84
11	75.4	3.6	73.6	5.4	.817	.84	.66	.84

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.
Solar Radiation, Weather, &c.*

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1	..	..	S. E. & S.	Cloudy, also slightly drizzling at 5 and 11 A. M.
2	135.0	0.10	S. & S. E.	Scatd. clouds till 7 P. M. cloudless afterwards, also drizzling at 3 A. M. and 2 P. M.
3	<i>Sunday.</i>			
4	138.4	..	N. W. & S. E. & calm.	Scatd. clouds.
5	..	..	N. W. & S. E.	Cloudless till 5 A. M. Scatd. ∩i and ∪i afterwards.
6	135.0	..	S. & E. & N. W.	Cloudless till 7 A. M. Scatd. ∩i and ∪i till 6 P. M. cloudless afterwards, also slightly drizzling at 1 P. M.
7	147.0	..	E. & S.	Cloudless till 7 A. M. Scatd. ∩i and ∪i till 8 P. M. cloudless afterwards.
8	148.0	..	S. & S. W.	Cloudless till 9 A. M. Scatd. ∪i till 4 P. M. cloudless afterwards.
9	145.0	..	S.	Cloudless till 9 A. M. Scatd. ∩i and ∪i till 6 P. M. cloudless afterwards.
10	<i>Sunday.</i>			
11	145.0	..	S. & N.	Cloudless till 9 A. M. Scatd. ∩i till 8 P. M. cloudless afterwards.
12	146.0	..	N. & W.	Cloudless.
13	142.0	..	W. & N.	Cloudless till 9 A. M. Scatd. ∪i till 3 P. M. cloudless afterwards.
14	142.6	..	N. & W. & N. E.	Cloudless till Noon. Scatd. ∪i till 4 P. M. cloudless afterwards.
15	148.0	..	S. & N. W.	Cloudless till 5 A. M. Scatd. clouds till 7 P. M. cloudless afterwards.
16	136.0	0.08	N. & S. & S. W.	Cloudless till 4 A. M. cloudy afterwards.
17	<i>Sunday.</i>			
18	139.0	..	W. & N. W. & N. E.	Cloudless.
19	141.0	..	N. W. & W. & N.	Cloudless.
20	145.0	..	N. & N. W. & W.	Scatd. ∩i till 5 A. M. cloudless till Noon. Scatd. ∩i till 6 P. M. cloudless afterwards.
21	142.6	..	W. & N. W.	Cloudless.
22	135.0	..	N. W. & W.	Cloudless.

∩i Cirri, ∩i Cirro strati, ∪i Cumuli, ∩i Cumulo strati, ∩i Nimbi, —i Strait, ∩i Cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the Month of October, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
23	139.0	..	N. W. & N.	Cloudless till 4 A. M. Scatd. \i and \i afterwards.
24	<i>Sunday.</i>	} 7.85	N. W. & N. W.	Cloudy, also raining the whole day. Cloudy also raining between Midnight to 7 A. M.
25	..			
26	..			
27	144.2	..	S. W. & W.	Cloudless till 9 A. M. Scatd. \i and \i afterwards.
28	140.0	..	S. W. & N. W.	Scatd. clouds till 5 P. M. cloudless afterwards.
29	132.0	..	S. W. & W.	Cloudless.
30	138.0	..	S. W. & W. & N.	Cloudless.
31	<i>Sunday.</i>			

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	29.829
Max. height of the Barometer occurred at 10 A. M. on the 30th,	..	..	30.049
Min. height of the Barometer occurred at 3 A. M. on the 26th,	..	..	29.291
Extreme range of the Barometer during the month,	..	..	0.758
Mean of the daily Max. Pressures,	..	..	29.907
Ditto ditto Min. ditto,	..	..	29.754
Mean daily range of the Barometer during the month	..	..	0.153

			°
Mean Dry Bulb Thermometer for the month,	..	..	81.3
Max. Temperature occurred at 2.3 and 4 P. M. on the 8th, 9th, and 11th,	..	..	90.6
Min. Temperature occurred at 6 A. M. on the 19th,	..	..	69.2
Extreme range of the Temperature during the month,	..	..	21.4
Mean of the daily Max. Temperature,	..	..	87.6
Ditto ditto Min. ditto,	..	..	76.2
Mean daily range of the Temperatures during the month,	..	..	11.4

			°
Mean Wet Bulb Thermometer for the month,	..	..	75.9
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	5.4
Computed Mean Dew-point for the month,	..	..	73.2
Mean Dry Bulb Thermometer above computed mean Dew-point,	..	..	8.1
			Inches.
Mean Elastic force of Vapour for the month,	..	..	0.806

			Troy grains.
Mean Weight of Vapour for the month,	..	..	8.68
Additional Weight of Vapour required for complete saturation,	..	..	2.56
Mean degree of humidity for the month, complete saturation being unity,	..	..	0.77

			Inches.
Rained 6 days, Max. fall of rain during 24 hours,	..	..	0.10
Total amount of rain during the month,	..	..	8.03
Prevailing direction of the Wind,	..	..	N. W. & W. & N.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of October, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour when
any particular wind was blowing it rained.

Hour.	N.	Rain on. N.	E.	Rain on. E.	S.	Rain on. S.	W.	Rain on. W.	N. W.	Rain on. N. W.	Calm.	Rain on. Calm.	Missed.
	No. of days.												
Midnight.	3	1			2	7	2	4	6	1		1	
1	2				2	7	2	5	7	1		1	
2	2				2	7	2	5	7	1		1	
3	2				2	5	3	5	7	1		1	1
4	2		1		2	5	2	5	7	1	1	1	1
5	2		1		2	5	2	6	7	1		1	1
6	3		1		1	5	3	4	9	1			
7	5	3	1			4	3	4	6	1			
8	7	4	2	1		3	1	2	5	1			1
9	8	3	2	1		2	2	3	5	1			
10	6	3	4	1		2	1	4	5				
11	5	4	2	2	1	2	3	2	6				
Noon.	6	1	3	2	2	2	4	2	6	1			
1	6	2		2	2	2	3	4	7	1			
2	4	2	1	1	2	2	4	5	6	1			1
3	5	2	1	1	2	2	5	3	7	1			
4	5	1	1	2	3	3	3	6	5	1			
5	5	1	2	2	3	3	3	7	3				
6	3	1	2	2	4	3	2	6	7				
7	3	1	2	2	3	3	3	7	6				
8	3	1	2	2	3	3	4	8	3	1			
9	3	1	2	2	4	3	3	8	3	1			
10	3	1	2	2	4	3	3	8	3	1			
11	3	1	2	2	5	2	2	8	3	1			

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
1	29.960	30.033	29.914	0.119	76.2	83.4	70.2	13.2
2	.968	.053	.909	.144	76.7	83.8	70.8	13.0
3	.959	.028	.912	.116	78.0	85.2	72.2	13.0
4	.977	.037	.934	.103	77.7	84.6	72.2	12.4
5	30.002	.068	.953	.115	76.6	83.4	71.2	12.2
6	.006	.077	.950	.127	74.9	82.4	69.1	13.3
7	Sunday.							
8	29.955	.029	.913	.116	73.7	80.2	68.6	11.6
9	.971	.033	.920	.113	73.9	81.1	68.2	12.9
10	.998	.073	.941	.132	74.2	81.6	68.0	13.6
11	30.008	.082	.953	.129	75.0	80.4	70.6	9.8
12	29.991	.068	.932	.136	73.7	81.2	67.1	14.1
13	.995	.062	.945	.117	72.8	80.8	66.2	14.6
14	Sunday.							
15	30.658	.133	30.004	.129	72.5	81.2	64.4	16.8
16	.072	.145	.007	.138	73.8	81.6	67.2	14.4
17	.081	.158	.026	.132	74.9	83.2	67.0	16.2
18	.093	.170	.037	.133	75.0	83.9	67.6	16.3
19	.069	.140	29.989	.151	73.7	82.8	66.2	16.6
20	.065	.147	30.009	.138	73.0	82.0	66.5	15.5
21	Sunday.							
22	.035	.127	29.954	.173	72.2	81.2	64.8	16.4
23	29.957	.037	.893	.144	71.6	80.0	64.8	15.2
24	.969	.042	.918	.121	71.3	79.0	65.1	13.9
25	30.021	.093	.954	.139	70.2	78.6	63.2	15.4
26	.066	.146	30.016	.130	70.9	79.0	65.0	14.0
27	.066	.141	29.999	.142	71.0	80.6	62.5	18.1
28	Sunday.							
29	.053	.119	30.002	.117	71.7	80.0	64.0	16.0
30	.058	.120	.007	.113	72.9	79.0	67.4	11.6

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Date.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of air.	Additional Weight of Va- pour required for com- plete saturation.	Mean degree of Humi- dity, complete satura- tion being unity.
	°	°	°	°	Inches.	T. gr.	T. gr.	
1	69.5	6.7	66.1	10.1	.640	6.96	2.70	0.72
2	70.9	5.8	68.0	8.7	.681	7.39	.41	.75
3	72.6	5.4	69.9	8.1	.725	.85	.34	.77
4	72.3	5.4	69.6	8.1	.717	.77	.33	.77
5	70.7	5.9	67.7	8.9	.674	.33	.44	.75
6	67.8	7.1	64.2	10.7	.601	6.54	.74	.71
7	Sunday.							
8	68.1	5.6	65.3	8.4	.623	.82	.14	.76
9	67.8	6.1	64.7	9.2	.611	.68	.33	.74
10	68.8	5.4	66.1	8.1	.640	.99	.10	.77
11	68.9	6.1	65.8	9.2	.634	.91	.40	.74
12	67.6	6.1	64.5	9.2	.607	.64	.32	.74
13	66.4	6.4	63.2	9.6	.582	.36	.35	.73
14	Sunday.							
15	66.6	5.9	63.6	8.9	.590	.45	.18	.75
16	68.3	5.5	65.5	8.3	.628	.87	.11	.77
17	69.3	5.6	66.5	8.4	.648	7.07	.21	.76
18	69.0	6.0	66.0	9.0	.638	6.95	.36	.75
19	67.4	6.3	64.2	9.5	.601	.56	.40	.73
20	66.9	6.1	63.8	9.2	.593	.49	.27	.74
21	Sunday.							
22	66.7	5.5	63.9	8.3	.595	.52	.03	.76
23	65.8	5.8	62.9	8.7	.576	.31	.09	.75
24	65.3	6.0	62.3	9.0	.565	.20	.13	.74
25	63.8	6.4	60.6	9.6	.534	5.86	.19	.73
26	64.5	6.4	61.3	9.6	.546	6.00	.23	.73
27	64.3	6.7	60.9	10.1	.539	5.92	.33	.72
28	Sunday.							
29	65.5	6.2	62.4	9.3	.567	6.22	.21	.74
30	67.6	5.3	64.9	8.0	.515	.74	1.99	.77

All the Hygrometrical elements are computed by the Greenwich Constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Temperature for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
Mid- night.	30.014	30.105	29.930	0.175	70.4	75.0	65.5	9.5
1	.007	.091	.928	.163	69.8	74.6	65.0	9.6
2	29.996	.074	.920	.154	69.2	74.0	64.7	9.3
3	.991	.066	.920	.146	68.5	73.8	64.2	9.6
4	.989	.061	.919	.142	68.0	73.2	63.4	9.8
5	30.002	.076	.919	.157	67.5	72.4	62.9	9.5
6	.023	.100	.959	.141	67.5	72.4	62.5	9.9
7	.050	.125	.981	.144	67.8	73.6	62.8	10.8
8	.079	.155	30.004	.151	71.9	77.6	66.4	11.2
9	.090	.164	.028	.136	74.1	78.8	69.6	9.2
10	.086	.170	.023	.147	76.4	80.2	72.9	7.3
11	.065	.139	29.995	.144	78.6	82.2	75.8	6.4
Noon.	.036	.115	.965	.150	80.0	82.6	75.4	7.2
1	.004	.087	.931	.156	80.7	83.7	77.6	6.1
2	29.979	.056	.908	.148	81.2	84.4	78.0	6.4
3	.967	.040	.893	.147	81.0	85.2	77.5	7.7
4	.965	.037	.896	.141	79.3	83.2	76.4	6.8
5	.972	.047	.903	.144	77.9	81.4	74.6	6.8
6	.982	.060	.911	.149	75.9	79.8	72.8	7.0
7	30.003	.076	.932	.144	74.5	79.7	71.5	8.2
8	.021	.096	.943	.153	73.4	78.0	70.0	8.0
9	.030	.105	.958	.147	72.6	77.4	69.0	8.4
10	.032	.113	.960	.153	71.8	76.6	68.2	8.4
11	.028	.114	.962	.152	71.1	75.8	67.4	8.4

The Mean Height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Hour.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.	Computed Dew point.	Dry Bulb above Dew point.	Mean elastic force of Vapour.	Mean Weight of Va- pour in a Cubic foot of Air.	Additional weight of vapour required for complete saturation.	Mean degree of hu- midity, complete satu- ration being unity.
	o	o	o	o	Inches.	Troy grs.	Troy grs.	
Mid- night.	66.8	3.6	65.0	5.4	0.617	6.80	1.30	0.84
1	66.3	3.5	64.5	5.3	.607	.69	.26	.84
2	65.9	3.3	64.2	5.0	.601	.62	.19	.85
3	65.5	3.0	64.0	4.5	.597	.58	.07	.86
4	65.2	2.8	63.5	4.5	.588	.48	.05	.86
5	64.7	2.8	63.0	4.5	.578	.39	.03	.86
6	64.7	2.8	63.0	4.5	.578	.39	.03	.86
7	64.9	2.9	63.2	4.6	.582	.43	.05	.86
8	66.8	5.1	64.2	7.7	.601	.58	.90	.78
9	67.8	6.3	64.6	9.5	.609	.64	2.43	.73
10	68.7	7.7	64.8	11.6	.613	.67	3.05	.69
11	69.3	9.3	64.6	14.0	.609	.59	.79	.64
Noon.	69.4	10.6	64.1	15.9	.599	.46	4.35	.60
1	69.8	10.9	64.3	16.4	.603	.50	.54	.59
2	70.0	11.2	64.4	16.8	.605	.51	.70	.58
3	70.0	11.0	64.5	16.5	.607	.53	.61	.59
4	69.1	10.2	64.0	15.3	.597	.45	.14	.61
5	69.4	8.5	65.1	12.8	.619	.71	3.45	.66
6	69.8	6.1	66.7	9.2	.633	7.10	2.47	.74
7	69.4	5.1	66.8	7.7	.635	.14	.04	.78
8	69.0	4.4	66.8	6.6	.655	.16	1.71	.81
9	68.4	4.2	66.3	6.3	.644	.06	.60	.82
10	67.8	4.0	65.8	6.0	.634	6.96	.49	.82
11	67.3	3.8	65.4	5.7	.626	.87	.41	.83

All the Hygrometrical elements are computed by the Greenwich Constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	°	Inches.		
1	140.0	..	W.	Cloudless.
2	115.0	..	W. & N.	Cloudless till 4 A. M. Scatd. ∩i and ∩i till 6 P. M. cloudless afterwards.
3	138.8	..	W. & N.	Scatd. ∩i till 5 P. M. cloudless afterwards.
4	119.0	..	W. & N. W. & N.	Cloudless till 10 A. M. Scatd. ∩i and ∩i till 6 P. M. cloudless afterwards.
5	140.0	..	N. & E.	Cloudless till 6 A. M. Scatd. ∩i and ∩i till 1 P. M. cloudless afterwards.
6	144.2	..	E. & N.	Cloudless.
7	<i>Sunday.</i>			
8	137.0	..	W. & S. W.	Scatd. ∩i and ∩i till 7 P. M. cloudless afterwards.
9	138.0	..	W. & N. W.	Cloudless till 4 A. M. Scatd. ∩i and ∩i till 5 P. M. cloudless afterwards.
10	134.6	..	W.	Cloudless till 7 A. M. Scatd. ∩i and ∩i afterwards.
11	..	..	W. & N. W.	Scatd. ∩i till 3 A. M. cloudless till 9 A. M. Scatd. clouds till 6 P. M. cloudless afterwards.
12	134.0	..	N. W. & W.	Scatd. ∩i and ∩i till 4 P. M. cloudless afterwards.
13	137.0	..	N. W. & W.	Cloudless till 11 A. M. Scatd. ∩i and ∩i till 5 P. M. cloudless afterwards.
14	<i>Sunday.</i>			
15	140.0	..	W.	Cloudless till 10 A. M. Scatd. ∩i till 6 A. M. cloudless afterwards.
16	138.0	..	W. & N.	Cloudless till 9 A. M. Scatd. ∩i and ∩i till 6 P. M. cloudless afterwards.
17	141.0	..	N. E. & N.	Cloudless.
18	143.0	..	N. & N. W.	Cloudless.
19	143.0	..	N. & N. W.	Cloudless.
20	141.5	..	N. & N. W.	Cloudless.
21	<i>Sunday.</i>			
22	137.0	..	N. W.	Cloudless till 11 A. M. Scatd. ∩i till 7 P. M. cloudless afterwards.
23	139.0	..	N. & N. W. & W.	Cloudless till 10 A. M. Scatd. ∩i till 4 P. M. cloudless till 8 P. M. Scatd. ∩i afterwards.
24	133.0	..	N. W. & W.	Scatd. ∩i till 10 A. M. Scatd. ∩i till 4 P. M. cloudless till 9 P. M. Scatd. ∩i afterwards.
25	135.6	..	N. & N. W.	Cloudless till Noon cloudy till 6 P. M. cloudless afterwards.

∩i Cirri, ∩i cirro strati, ∩i cumuli, ∩i cumulo strati, ∩i nimbi, —i strati, ∩i cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	0	Inches.		
26	135.0	..	N. W. & S. E. & N.	Cloudless till 2 A. M. Scatd. \searrow i and \nearrow i till 3 P. M. cloudless afterwards.
27	139.7	..	N. E. & N. W.	Cloudless till Noon Scatd. clouds till 6 P. M. cloudless afterwards.
28	<i>Sunday.</i>			
29	139.4	..	N. & N. E.	Cloudless.
30	..	..	N. & E.	Cloudy also drizzled from 10 till 11 P. M.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	30.017
Max. height of the Barometer, occurred at 10 A. M. on the 18th,	..	..	30.170
Min. height of the Barometer, occurred at 3 P. M. on the 23rd,	..	..	29.893
<i>Extreme Range</i> of the Barometer during the month,	..	..	0.277
Mean of the Daily Max. Pressures,	..	..	30.091
Ditto ditto Min. ditto,	..	..	29.961
<i>Mean Daily range</i> of the Barometer during the month,	..	..	0.130

			°
Mean Dry Bulb Thermometer for the month,	..	..	73.8
Max. Temperature, occurred at 3 P. M. on the 3rd,	..	..	85.2
Min. Temperature, occurred at 6 A. M. on the 27th,	..	..	62.5
<i>Extreme Range</i> of the Temperature during the month,	..	..	22.7
Mean of the Daily Max. Temperature,	..	..	81.5
Ditto ditto Min. ditto,	..	..	67.3
<i>Mean Daily range</i> of the Temperature during the month, ..	..	..	14.2

			°
Mean Wet Bulb Thermometer for the month,	..	..	67.8
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer,	..	..	6.0
Computed Mean Dew Point for the month,	..	..	64.8
Mean Dry Bulb Thermometer above computed Mean Dew Point,	..	..	9.0

			Inches.
Mean Elastic force of vapour for the month, ..	..	..	0.613

			Troy grains.
Mean weight of vapour for the month, ..	..	..	6.71
Additional weight of vapour required for complete saturation,	..	..	2.27
Mean degree of Humidity for the month, complete saturation being unity,	..	..	0.75

			Inches.
Drizzled 1 day. Max. fall of rain during 24 hours,	..	..	Nil.
Total amount of rain during the month,	..	..	Nil.
Prevailing direction of the Wind, ..	..	..	W. & N. W. & N.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of November, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour,
when any particular wind was blowing, it rained.

Hour.	N.	Rain on.	N. E.	Rain on.	E.	Rain on.	S. E.	Rain on.	S.	Rain on.	S. W.	Rain on.	W.	Rain on.	N. W.	Rain on.	Calm.	Rain on.	Missed	
					No. of days.															
Midnight.	7		2		1						1	8	5	1				1	1	
1	8		2		1						1	8	5	1			1			
2	10		2		1						1	6	5	1			1		1	
3	10		2		1						1	5	5	1			1		2	
4	10		1		1							6	6						2	
5	7		2		1						2	6	6							
6	10		2		1						2	5	6							
7	9		4		1						2	4	6							
8	10		3		1				1	2		5	5						1	
9	7		1		1							5	5	10						
10	8		2		1						1	7	7							
11	9		3		3						1	6	4							
Noon.	7		5		1						2	5	6							
1	6		5				1				2	5	7							
2	6		5		1		1				1	7	5							
3	8		2		1		1				1	6	7							
4	2		2		3		1					7	11							
5	2		1		4		1					8	9						1	
6	5		1		3		1					8	8							
7	4				2		1		1			9	9							
8	4				2		1		1			9	9							
9	4				2		1		1			10	8							
10	5				3		1					10	7							
11	5				2		1					10	7						1	

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

feet.

Height of the Cistern of the Standard Barometer above the Sea level, 18.11

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
1	30.053	30.119	29.989	0.130	70.2	73.4	68.6	4.8
2	.010	.084	.956	.128	70.1	73.0	68.4	4.6
3	.012	.071	.964	.107	68.6	70.2	67.8	2.4
4	29.979	.053	.906	.147	69.3	76.0	65.1	10.6
5	<i>Sunday.</i>							
6	30.021	.098	.972	.126	67.4	75.9	60.6	15.3
7	.031	.124	.979	.145	66.7	75.6	60.8	14.8
8	29.985	.072	.921	.151	65.5	75.2	57.8	17.4
9	30.005	.077	.935	.142	66.3	76.8	58.0	18.8
10	.037	.122	.988	.134	65.6	75.8	57.8	18.0
11	.037	.104	.984	.120	64.7	74.2	56.6	17.6
12	<i>Sunday.</i>							
13	29.959	.034	.902	.132	65.2	74.6	57.2	17.4
14	.994	.063	.949	.114	66.2	75.6	57.6	18.0
15	30.026	.110	.977	.133	66.9	75.3	59.4	15.9
16	.009	.086	.965	.121	67.4	76.4	60.0	16.4
17	.034	.132	.983	.149	67.8	76.8	61.1	15.7
18	.037	.110	.992	.118	68.2	77.8	60.2	17.6
19	<i>Sunday.</i>							
20	.040	.099	.997	.102	66.6	74.1	62.5	11.6
21	.087	.163	30.035	.128	65.5	74.2	59.0	15.2
22	.085	.172	.037	.135	63.9	72.2	57.4	14.8
23	.053	.141	29.982	.159	64.5	73.8	56.4	17.4
24	.049	.109	30.000	.109	65.6	75.9	58.2	17.7
25	.047	.120	.003	.117	66.5	76.7	57.8	18.9
26	<i>Sunday.</i>							
27	.031	.104	29.972	.132	64.6	73.0	57.6	15.4
28	.045	.114	30.002	.112	65.0	74.2	57.6	16.6
29	.081	.156	.029	.127	66.4	77.4	57.6	19.8
30	.105	.206	.057	.149	68.1	78.6	58.8	19.8
31	.065	.147	.005	.142	69.8	78.8	64.6	14.2

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers, are derived from the twenty-four hourly observations made during the day.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

Daily Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.—(Continued.)

Date.	Mean Wet Bulb Thermo- meter.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight of Va- pour required for com- plete saturation.	Mean degree of Humidity, complete saturation be- ing unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
1	67.9	2.3	66.7	3.5	0.653	7.17	0.88	0.89
2	67.9	2.2	66.8	3.3	.655	.22	.81	.90
3	67.0	1.6	66.2	2.4	.642	.09	.58	.92
4	65.7	3.6	63.9	5.4	.595	6.56	1.27	.84
5	<i>Sunday.</i>							
6	62.6	4.8	59.7	7.7	.518	5.73	.66	.78
7	60.8	5.9	57.3	9.4	.478	.29	.94	.73
8	59.6	5.9	56.1	9.4	.459	.11	.87	.73
9	60.4	5.9	56.9	9.4	.472	.22	.93	.73
10	59.1	6.5	55.2	10.4	.445	4.95	2.05	.71
11	59.2	5.5	55.9	8.8	.456	5.07	1.73	.75
12	<i>Sunday.</i>							
13	59.7	5.5	56.4	8.8	.464	.15	.76	.75
14	60.9	5.3	57.7	8.5	.485	.36	.76	.75
15	62.0	4.9	59.1	7.8	.508	.62	.66	.77
16	62.8	4.6	60.0	7.4	.523	.79	.60	.78
17	62.9	4.9	60.0	7.8	.523	.78	.70	.77
18	63.1	5.1	60.0	8.2	.523	.78	.80	.76
19	<i>Sunday.</i>							
20	62.5	4.1	60.0	6.6	.523	.79	.42	.80
21	60.0	5.5	56.7	8.8	.469	.19	.79	.74
22	58.5	5.4	54.7	9.2	.438	4.88	.75	.74
23	58.9	5.6	55.5	9.0	.450	5.01	.75	.74
24	60.1	5.5	56.8	8.8	.470	.21	.79	.74
25	61.6	4.9	58.7	7.8	.501	.55	.64	.77
26	<i>Sunday.</i>							
27	59.4	5.2	56.3	8.3	.462	.15	.63	.76
28	59.8	5.2	56.7	8.3	.469	.21	.66	.76
29	60.9	5.5	57.6	8.8	.483	.34	.83	.75
30	63.0	5.1	59.9	8.2	.521	.76	.79	.76
31	64.7	5.1	62.1	7.7	.561	6.17	.78	.78

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon.

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Tempera- ture for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	o	o	o	o
Mid- night.	30.029	30.095	29.960	0.135	63.4	71.2	60.2	11.0
1	.020	.085	.945	.140	62.7	70.8	59.6	11.2
2	.010	.065	.936	.129	62.2	69.8	58.4	11.4
3	.002	.064	.930	.134	61.9	69.7	59.0	10.7
4	.002	.084	.934	.150	61.3	69.5	57.8	11.7
5	.016	.097	.943	.154	60.9	69.2	57.2	12.0
6	.033	.112	.962	.150	60.5	69.2	56.6	12.6
7	.056	.147	.981	.166	60.4	69.2	56.4	12.8
8	.090	.181	30.007	.174	63.5	69.6	59.6	10.0
9	.108	.205	.032	.173	66.1	70.8	63.2	7.6
10	.110	.206	.034	.172	68.3	72.0	65.4	6.6
11	.091	.184	.018	.166	71.0	73.6	67.6	6.0
Noon.	.060	.138	29.984	.154	73.2	76.1	70.2	5.9
1	.028	.111	.950	.161	74.5	77.5	70.2	7.3
2	.003	.082	.921	.161	75.1	78.6	69.8	8.8
3	29.990	.073	.906	.167	74.6	78.8	69.2	9.6
4	.984	.062	.902	.160	72.9	76.4	68.6	7.8
5	.991	.063	.907	.156	71.3	75.2	68.2	7.0
6	30.003	.063	.922	.141	69.1	72.1	66.2	6.2
7	.019	.082	.937	.145	67.7	71.7	65.0	6.7
8	.033	.097	.945	.152	66.6	70.0	64.0	6.0
9	.043	.101	.956	.145	65.6	69.4	62.8	6.6
10	.049	.113	.964	.149	64.8	69.8	61.4	8.4
11	.042	.096	.953	.143	64.0	70.0	61.2	8.8

The Mean height of the Barometer, as likewise the Mean Dry and Wet Bulb Thermometers are derived from the observations made at the several hours during the month.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

Hourly Means, &c. of the Observations and of the Hygrometrical elements
dependent thereon — (Continued.)

Hour.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Va- pour in a cubic foot of Air.	Additional Weight of Vapour required for complete satu- ration.	Mean degree of Hu- midity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid- night.	60.6	2.7	58.6	4.8	0.499	5.56	0.97	0.85
1	60.1	2.6	58.3	4.4	.494	.52	.87	.86
2	59.7	2.5	57.9	4.3	.488	.45	.84	.87
3	59.5	2.4	57.8	4.1	.486	.44	.79	.87
4	59.0	2.3	57.2	4.1	.476	.33	.79	.87
5	58.6	2.3	56.8	4.1	.470	.27	.77	.87
6	58.3	2.2	56.5	4.0	.465	.22	.75	.87
7	58.2	2.2	56.4	4.0	.464	.20	.75	.87
8	60.3	3.2	58.1	5.4	.491	.47	1.08	.84
9	61.7	4.4	59.1	7.0	.508	.63	.47	.79
10	62.6	5.7	59.2	9.1	.509	.63	.97	.74
11	63.7	7.3	60.0	11.0	.523	.74	2.51	.70
Noon.	64.7	8.5	60.4	12.8	.530	.80	3.02	.66
1	65.1	9.4	60.4	14.1	.530	.78	.40	.63
2	65.2	9.9	60.2	14.9	.527	.73	.61	.61
3	64.8	9.8	59.9	14.7	.521	.67	.53	.62
4	63.9	9.0	59.4	13.5	.513	.60	.13	.64
5	64.0	7.3	60.3	11.0	.528	.80	2.53	.70
6	64.0	5.1	61.4	7.7	.548	6.04	1.74	.78
7	63.4	4.3	60.8	6.9	.537	5.94	.52	.80
8	62.8	3.8	60.5	6.1	.532	.90	.31	.82
9	62.3	3.3	60.3	5.3	.528	.87	.13	.84
10	61.7	3.1	59.8	5.0	.520	.77	.06	.85
11	61.1	2.9	59.1	4.9	.508	.65	.00	.85

All the Hygrometrical elements are computed by the Greenwich constants.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
1	..	0.10	N. E. & E. & N.	Cloudy and also drizzling occasionally.
2	..	0.28	N. E. & N. & E.	Cloudy and occasionally drizzling.
3	..	0.70	N. E. & N.	Cloudy and constantly drizzling.
4	132.0	..	N. W. & N. E. & N.	Scatd. clouds till 4 P. M. cloudless afterwards.
5	<i>Sunday.</i>			
6	136.2	..	N. & W. & N. W.	Cloudless.
7	133.4	..	N. W.	Cloudless.
8	136.4	..	W. & E.	Cloudless and foggy between 7 till 11 P. M.
9	134.0	..	N. & W.	Cloudless.
10	136.6	..	N.	Cloudless.
11	133.0	..	N. & S.	Cloudless.
12	<i>Sunday.</i>			
13	130.8	..	N. & N. W.	Cloudless, also foggy between 7 and 11 P. M.
14	135.0	..	N.	Cloudless till 11 A. M. Scatd. ☽i and ☾i till 6 P. M. cloudless afterwards.
15	128.0	..	N. W. & N. & W.	Cloudless till 5 A. M. Scatd. ☽i and ☾i till 3 P. M. cloudless afterwards.
16	137.4	..	N. & N. W. & W.	Cloudless till 11 A. M. Scatd. ☾i till 4 P. M. cloudless afterwards.
17	135.0	..	N. W. & N. E.	Cloudless.
18	138.9	..	N. & N. W. & E.	Cloudless till 1 P. M. Scatd. ☽i and ☾i till 6 P. M. cloudless afterwards.
19	<i>Sunday.</i>			
20	127.4	..	N. W. & N. & W.	Scatd. clouds till 7 A. M. cloudless till 11 A. M. Scatd. ☾i till 4 P. M. cloudless afterwards.
21	133.6	..	N. & N. W.	Cloudless till 11 A. M. Scatd. ☽i till 4 P. M. cloudless afterwards.
22	131.5	..	N. W. & N.	Cloudless.
23	131.0	..	N. & N. W.	Cloudless.
24	135.5	..	N. & N. W.	Cloudless.
25	135.2	..	N. & S. W.	Cloudless.
26	<i>Sunday.</i>			
27	131.0	..	N. W. & N.	Cloudless.

☽i Cirri, ☾i Cirro strati, ☾i Cumuli, ☽i Cumulo strati, ☽i Nimbi, —i Strati,
☽i Cirro cumuli.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the Month of December, 1858.*

Solar Radiation, Weather, &c.

Date.	Max. Solar radiation.	Rain Gauge 5 feet above Ground.	Prevailing direction of the Wind.	General Aspect of the Sky.
	o	Inches.		
28	137.5	..	N. W. & W.	Cloudless.
29	140.0	..	W. & N. W.	Cloudless till 2 P. M. Scatd. \searrow till 6 P. M. cloudless afterwards.
30	138.6	..	W. & N. W.	Cloudless till 5 A. M. Scatd. \searrow and \searrow till 6 P. M. cloudless afterwards.
31	135.0	..	N. & W.	Cloudless till 7 A. M. Scatd. \searrow till 3 P. M. cloudless afterwards.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

MONTHLY RESULTS.

			Inches.
Mean height of the Barometer for the month,	..	..	30.034
Max. height of the Barometer occurred at 10 A. M. on the 30th,	..	..	30.206
Min. height of the Barometer occurred at 4 P. M. on the 13th,	..	..	29.902
<i>Extreme range</i> of the Barometer during the month,	..	..	0.304
Mean of the daily Max. Pressures,	..	..	30.111
Ditto ditto Min. ditto,	..	..	29.981
<i>Mean daily range</i> of the Barometer during the month,	..	..	0.130

			°
Mean Dry Bulb Thermometer for the month,	..	..	66.7
Max. Temperature occurred at 3 ½ P. M. on the 31st,	..	..	78.8
Min. Temperature occurred at 7 A. M. on the 23rd,	..	..	56.4
<i>Extreme range</i> of the Temperature during the month,	..	..	22.4
Mean of the daily Max. Temperature,	..	..	75.2
Ditto ditto Min. ditto,	..	..	60.2
<i>Mean daily range</i> of the Temperatures during the month,	..	..	15.0

			°
Mean Wet Bulb Thermometer for the month,	..	..	61.9
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer, ..	..	..	4.8
Computed Mean Dew-point for the month, ..	..	..	59.0
Mean Dry Bulb Thermometer above computed mean Dew-point, ..	..	..	7.7

			Inches.
Mean Elastic force of Vapour for the month,	..	..	0.506

			Troy grains.
Mean Weight of Vapour for the month, ..	..	..	5.60
Additional Weight of Vapour required for complete saturation, ..	..	..	1.63
Mean degree of humidity for the month, complete saturation being unity,	..	..	0.78

			Inches.
Rained 3 days, Max. fall of rain during 24 hours,	..	..	0.70
Total amount of rain during the month, ..	..	..	1.08
Prevailing direction of the Wind, ..	..	N. & N. W. & W.	

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta,
in the month of December, 1858.*

MONTHLY RESULTS.

Table showing the number of days on which at a given hour any particular wind
blew, together with the number of days on which at the same hour when
any particular wind was blowing, it rained.

Hour.	N.	Rain on.	N. E.	Rain on.	E.	Rain on.	S. E.	Rain on.	S.	Rain on.	S. W.	Rain on.	W.	Rain on.	N. W.	Rain on.	Calm.	Rain on.	Missed.
	No. of days.																		
Midnight.	9		2	1	2	1			1				3		9				1
1	10		2	1	2	1			1				3		9				
2	11		2	1	2	1			1				3		8				
3	10		2	1	2	2							4	1	8				1
4	11		2	1	2	2							4		8				
5	10		3	2	1								4		9				
6	8		2	1					2				8		7				
7	8		3	1			1						8		7				
8	9	1	2						1		1		3		10				1
9	13		2		2						1		2		7				
10	12		4		1				1				4		5				
11	9		2		2		1		1		1		4		7				
Noon.	5	1	1		2		1		1				3		14				
1	6				1		1						7		11				
2	7	1	1								1		8		8				
3	5		1	1	1						3		9		8				
4	9	1	1				1	1			3		7		5				1
5	10	1	2	1	1						2		6		6				
6	9	1	4	1	1				1		1		5		5				
7	10		4		1				1		1		5		5				
8	11		4	1	1				1				5		5				
9	11		4	1	1				1				5		5				
10	12		3		1				1				5		5				
11	11		3		1				1				5		5				1

ERRATA IN THE JOURNAL FOR 1858.

VOL. XXVII.

Page 230, notes, last line *for* adjective *read* adjection.

„ 235, notes l. 3 *ab infra* *read* सर्वान्.

„ 240, notes, l. 15 *for* and *read* are.

„ 248, notes, l. 6 *for* चार *read* चोर.

„ 249, notes, l. 2 *for* Gautama *read* Gotama.

„ „ notes, l. 4 *for* Ras *read* Rao.

„ 302, l. 14 *for* occidental *read* accidental.

„ 303, l. 23 *read* अक्षिण् and अंशुजाल.

„ 305, l. 20 *for* which *read* while.

„ 313, l. 1 *for* اتمام يافت ياني *read* اتمام يافت باني

The conclusion of Mr. Hodgson's paper, given in this Vol. having been sent to England for his revision, we are enabled to publish his corrections.

The Editors are glad to find that in this part (the MS. having been legible throughout) there are hardly any errors of importance.

We give the following extract from Mr. Hodgson's letter.

“The errata amount to little more than a perseverance in that titular misnomer whereby comparative vocabularies of the empirical kind were confounded with grammatical treatises. Papers one and two, on the languages of the broken tribes and on the dialectic differences of the language of the Kiranti tribe, were of the former sort. Papers three and four on the Vayu and Bahing, were of the latter sort, and should therefore have been kept apart, as well from each other as from the preceding papers, even though you had determined to throw the descriptive part of Vayu and Bahing to the *end* of the papers on them. Whereas you have run the whole of the four papers into one, under the style and title of “Comparative Vocabulary of the languages of the broken tribes of Nepal,” a designation which is true only in regard to the *FIRST* of these four papers; for the Kirantis are *not* one of the broken tribes; nor is there the least affinity between the empirical treatment of the vocabularies of both one and the other and the grammatical analyses which follow, though of the samples of language chosen for this analysis, one belonged to a tribe classed with the broken, and the other to a tribe classed among the septs or clans of the Kirantis.

Therefore I have erased the heading of the part now returned to you (Comparative Vocabulary, &c.) and substituted “grammatical analysis of the Bahing

dialect of the Kiranti language ;" and, for the top of each successive page, "Bahing grammar" in lieu of Bahing Vocabulary."

Page 393, Declension, case 7, dele All.

„ 396, dele comma between that and which, voce Relative of all genders: and in the note *for* it *read* The relative.

Page 399, *for* kwag-namme *read* kwagnamme.

„ 409 *for* Transitives in to *read* Transitives in do.

„ 421, to the note *add* For a paradigm of transitives, in "to" which change the t into d, see on to pages 439-441.

Page 438 *for* Jito be *born* *read* Jito be *torn*.

Bottom of same page in note *for* Dravidianum *read* Dravidianism.

To note at page 443 *add* It is published as No. XXVII. of Extracts from the Records of the Government of Bengal.

Page 446, l. 7 *for* fermed *read* formed.

„ 450, l. 4 *for* pasung *read* Pasung.

„ „ l. 22 *for* and superest ager, *read* et superest ager.

„ 454, 5 lines from bottom *after* of good size *add* a comma.

CORRIGENDA AND ADDENDA

To the papers on the languages of the broken tribes of Nepal, &c.

—By B. H. HODGSON, Esq. B. C. S.

[See *Journal*, Nos. V. and VI. for 1857.]

[We have received from Mr. Hodgson the following list of the corrections and additions which he has found it necessary to make in his papers published in Vol. XXVI. We have already stated in a former number that much of the MS. was left with us in a very rough and illegible state, and in spite of every care, many errors could not but creep in. In fact it was only at Mr. Hodgson's own earnest wish, that we consented to have it printed at all, as we did not consider the MS. in a fit state for publication. We therefore gladly publish the list in full, by way of an appendix to the whole series of communications; for the *additions*, of course, we are not responsible, as they were not in the original MS.]

We may also add that the latter half of the series of papers was fairly legible; and we are gratified to notice that throughout that portion the errors are very trifling. Had all the MS. been in the same condition, we could, with infinitely less trouble to ourselves, have given *the whole* with equal correctness.—EDS.]

Page 318, line 2 from bottom *for* 5-5 *read* 5-12.

„ 319, „ 6 from top *for* Baking *read* Bahing.

„ 322, col. Hayu line 13 add note, Ang, Ung, A = my, thy, his, &c. Angmu, Ungmu, Amu = mine, thine, &c. and so in plural. See on to complete view of this tongue in sequel.

Page, 322 col. Hayu between lines 13 and 14 add A or Amu.

„ „ „ „ line 15 dele A-mu.

„ „ „ „ „ 16 *for* Ang-ku *read* Ang-ki.

„ „ „ „ „ 18 *for* Un-ni-ma *read* Un-ni-mu.

„ 323 „ Pahri „ 4 add note, Gu is the minor sign; hma, the major. They are affixed to all qualitatives, numeral, pronominal and other: see on.

Page 324 col. Pahri line 16 *read* Guhma and add note. See note at the word ten.

„ 325 „ „ „ 13 add note, Dha is sometimes substituted for, and sometimes superadded to, the major sign or hma, as in Newari, to which tongue the Pahri bears a close resemblance.

Page 333 and onwards, as the heading of the pages *for* “languages of the broken tribes of Nepal” *read* “dialects of the Kirānti language.”

Page 333 col. Rodung line 18 add note. In this and the following columns *sá* prefixed means flesh. It is the segregative and is dropt as usual in composition, thus in column two, *pí* being cow, *pí yúba* or *pí yúva* is cow's horn and not *pí sayuba*, see on to the word skin.

Page 334 col. Rodung line 6 add note. Literally cow its male its calf. This is the general way of expressing a possessive or genitive: See father and mother and the 3rd possessive pronoun. It will be seen that the latter in its conjunct form is a general prefix to the radical word wherever relationship can be predicated even when a noun stands alone, thus, *umpa* = father, literally his father, *pater illius vel istius*. But the prefix is often used when no relationship exists or can be imagined, thus, *ú kholen* = day in column 2nd. In fact it is nearly an inseparable particle.

Page 334 col. Rúngchhénbúng, line 32 dele *Pá*.

„ 335 „ Chowrasya, line 30 add as note on *ápó*.—For change in the root, *pá* to *pó* see Báhing in sequel, and observe, the root can *never* be used *alone*.

Page 335, col. Kúlung'ya, line 33 dele *pá*.

„ 336 „ Rodong „ 9 for Chhong gara read Chhonggarachha.

„ „ „ „ 32 dele *ma*.

„ „ „ Rúngchhénbúng between lines 23 and 24 for *womau* read woman.

„ „ „ „ 32 for *má* read *euma*.

„ „ „ Chhintángya l. 20 for *Pá* read *Upá*.

„ „ „ „ 27 dele *ma*.

„ „ „ Náchheréng „ 30 dele *ma*.

„ „ „ end of the note for *Thul* read *Thulung*.

„ 337 col. Yákha line 32 dele *ma*.

„ „ „ Kulúng'ya l. 31 dele *ma*.

„ „ „ Thulungg'ya l. 38 add note, *gna-u* = *gna-wa*, and *gnawa*, *gnami* like *tawa* *tami*, boy and girl, in *Vayu*.

Page 337 col. Thulungg'ya l. 4 from bottom for *Résépmá* grain read *Résépmá Má* is grain.

Page 337 col. Thulungg'ya l. 2 from bottom for *Upáp Bheḍa* read *Upáp-bhéda*.

Page 338 col. English l. 30 add note, Dual omitted accidentally. It exists generally. The note below gives it for *Rungelihen*.

Page 338 dele note* and read as follows.—See note at bone and at calf. *U'-hok'wa* = its cover: *Sahokwa* flesh cover. So *Singhokwa* is tree cover or bark.

Page 338 col. Nachheréng l. 22 dele note†.

„ „ „ Rúngchhénbúng l. 32 add § at the word *Ungkang*.

„ „ „ „ l. 36 read *O Ko* &c. as in singular.

„ „ „ „ l. 39 dele § at the word *Ungkung*.

„ „ „ l. 2 from bottom read sign of number.

„ „ „ l. 1 „ read *vel Oko-chi*, *vel Euyakochi*.

„ 339 col. Thulungg'ya l. 16 read *Nepsung*, sunshine. *Nem sun*.

„ 340 „ English l. 5 add note. The two forms of these possessives were not obtained in the plural. Perhaps from insufficient questioning whereby the dual was missed.

Page 340 col. English l. 7 dele * and also the note.

„ „ „ „ l. 23 for *Conj.* read *Acc.* and dele § and also the note.

„ „ „ „ for notes † and ‡ read *Eukta* is the separate form; and so also *heusa sumya*, &c. *chha* is for beings, and *pop* for things, thus *eukcha mana* is one of human kind, *eukchha duwacha* one man, *eukchha menchhachha*, one woman; *euk pop topti*, one hat. *Bangpang* for the major and *pop* for the minor is *Mikir*. Other segregatives were named to me but confusedly, and if they be proper to *Kiranti* they are fast becoming obsolete.

Page 340 col. Rodung dele *Chi*, *D. Nin*, &c.

„ „ „ Rúngchhénbúng l. 4 for *Eukhha* read *Eukchha*.

„ „ „ „ l. 6 dele unchanged.

„ 341 col. Thulungg'ya l. 7 for *Ni* read humans.

- " " " " l. 8 *read* animals and things. Ní, root.
 " " " " l. 10 add and things.
 " " " " l. 12 *for* Gnolo *read* Gnole.
 " " " " l. 23 *for* Kwongus-ang Ko-dyum" *read* Kwongu-sangkodyum.
 " 342 col. English dele No genders D. and Pr. &c.
 " " " " l. 13 dele note *.
 " " " " l. 16 add note. There is no relative when, and then is not properly a correlative. The native equivalents ab, jub, &c. aud cho, yu, khu, infra, are from Urdu and Newari and were used only to prevent misapprehension when questioning.
 Page 342 col. English l. 26 *for* (chó) *read* above.
 " " " " l. 27 dele above.
 " " " " l. 28 dele Below (yu).
 " " " " l. 29 *for* (Khu) *read* Below.
 " " " Rodung l. 5 dele Hic hæc hoc, &c.
 " " " " l. 7 *for* ditto *read* Hya ko.
 " " " " l. 8. *for* Dósó *read* Tyako, *for* Tyaho *read* Tya and add note, Hya and Tya, are of all genders. Their dual and plural are formed as in the next dialect.
 Page 342 col. Rúngchhénbúng l. 8 dele Oko*
 " " " " l. 9 dele Okochi &c.
 " " " " l. 10 dele Sin. Pl.
 " " " " l. 11 *for* Hynoko &c. *read* Mo.
 " " dele note*.
 " " dele note†.
 " " add in the 2nd line in the bottom Chi is the dual and nin the plural sign for all.
 " " last line at bottom dele subs.
 Page 344 col. English l. 2 dele Up &c.
 " " " " l. 27 dele Dual, Plural.
 " " " Rúngchhénbúng l. 2 dele Dhutnang &c.
 " " " " l. 29 *read* Im'sa, Singular.
 " " " " l. 34 *for* (so shitése, *read* (so shit = esei—and *for* Piss chesa *read* Piss = chesa).
 Page 344 add at bottom as note, Chi and nin, passim, are the dual and plural signs.
 " 346 col. English l. 5 dele sign * and note.
 " " " " l. 6 dele sign * and note.
 " " " " l. 16 dele sign † and note.
 " " " Rodung l. 17 dele note.†
 " " " Rúngchhénbúng l. 10 add note That is, puang, give to me, makes puang chang in dual and puang nang in plural; but pú, give to any, makes pu-chi dual and pu-nin, plural. So Né = take from me has chi and niu for dual and plural: but battu = take generally has chu for dual and num for plural.
 Page 346 col. Rúngchhénbung l. 27 *for* yen mettu *read* yeng mettu and dele khangmúsá?
 Page 346 col. Rúngchhénbúng l. 29 add as a note,—Mettu is causal and yeng mettu is cause to see, khang mettu, cause to hear, both used for tell.
 " " " " l. 3 from bottom *for* Khan *read* Khang.
 Page 346 at the end *for* note note § *read*—Generic signs stick to numerals but can't attach to the adjective, e. g. nuwa mana, euk chha nuwa mana nuwa chúpi, euk pop nuwa chúpi. In Newari these segregatives attach to both numeral and adjective, thus chhahma bhinghma mana = eukchha nuwa mana and chhagu bhing-gu chupi = eukpop nuwa chúpi.
 Page 348 col. English l. 1 dele sign * and note.
 " " " " l. 14 dele Circular.
 " " " " l. 18 dele Unlevel, uneven.†
 " " " Rúngchhénbúng l. 1 and 2, dele notes.†

- „ „ at the end *for* former *read* = great. Pang vel bang vel wang is the same as the numeral suffix.
 „ 350 col. Bálálí l. 14 add ‡.
 „ 350 „ Lóhóróng l. 23 dele fresh, and add §.
 Page 351 col. English l. 11 dele||.
 „ „ „ Báhing, l. 20 add||.
 „ „ „ Lóhóróng l. 8 *for* Pepasá *read* Pipasá.
 „ „ „ l. 5 from the bottom *for* Dangmaling *read* Dúngmali, ng.
 „ „ „ l. 3 from bottom *for* Búcha Lámi *read* Búcha and Lámi.
 „ „ „ l. 2 from bottom *for* Séthe *read* Sé.
 „ „ at the end *for* any one's filius istius. *read* any one's child, filius istius or illius.
 „ 352 col. English l. 3 dele Wa tami my girl.
 „ „ „ Lóhóróng l. 5 add sign || and note “There is no proper name for son and daughter, the words are the same as those for boy and girl, nor to these can the 1st or 2nd pronoun prefix be added, as the 3rd is, nor would that serve the turn, umpasa being filius cujusvis and hence um being the almost inseparable adjunct of nouns. See the words father and mother and the pronouns possessive. In Báhing there is an anomalous change of the radical word however which must be remembered.”
 Page 352 col. Báhingyá l. 19 dele Mo po dad and Mam po.
 „ „ „ „ l. 22 dele ipo thy, apo his.
 „ „ „ Lóhóróng l. 2 add = my.
 „ „ „ „ l. 24 dele Pá. Ung pa, &c.
 „ „ „ Lambichhong l. 17 dele Pa
 „ „ „ Sàngpáng l. 1 *for* Ar' *read* Aa.
 „ „ „ Dúngmali l. 19 dele Pa, and add note “Throughout this column the prefixing of the possessive pronoun sign is indispensable. The root pá cannot be used alone. The further change of pá into pó is peculiar to Báhing.”
 Page 353 col. Lóhóróng l. 2 dele gen. sign.
 „ „ „ „ l. 5 dele Lang leg.
 „ „ „ „ l. 6 add note Throughout this column kholi and lan, lang, lak are = leg; and blem tem, phek phak are segregatives or rather one segregative used for flat things. See arm and leg and compare hand and foot.
 Page 353 col. Lóhóróng l. 9 add note Sing = tree in this and next column is segregative. Sing i-sa is literally tree its fruit.
 Page 353 col. Lambichhong l. 9 dele (ma fem, passim.)
 „ „ „ „ l. 10 *read* mendima.
 „ „ „ Bálálí l. 11 *for* Mithu *read* Mithi.
 „ 354 „ Báhing. l. 6 *for* arms *read* arm.
 „ „ „ Lóhóróng l. 6 add all and only.
 „ „ „ „ l. 8 *for* arms *read* arm.
 „ „ „ Lámichhóng l. 7 add flat arm.
 „ „ „ „ l. 12 dele “sá gen. sign.
 „ „ „ Bálálí l. 8 add sign * and arm flat.
 „ „ „ Sàngpúng l. 8 add arm flat.
 „ „ „ Dúmi l. 6 *for* head *read* Do = head.
 „ „ „ Khaling l. 6 add flat arm.
 „ 355 „ Báhing l. 18 dele Mo.*
 „ „ „ Lóhóróng l. 23 dele Ma. Ma.
 „ „ „ Lámichhóng l. 16 dele Ma.
 „ „ „ Bálálí l. 19 dele Má.
 „ „ „ Sàngpúng l. 17 dele Má.
 „ „ „ Dúngmáli l. 16 dele Má.
 „ 355 l. 11 from bottom *for* as ad doubled and *read* always added but,—and add See arm and hand, leg and foot.
 Page 356 col. Báhing. l. 7 dele from so to signs and add note—Gna-wa gna-mi agree with ta-wa, ta-mi, &c. but pa-sang ma-sang of column 6th makes the sex signus prefixual. Dumi and Khaling, W. compare Dihong of Assam.

- Page 356 col. Báhing. l. 20 dele = Kho-la Dihong of Asam.
 " " " Lóhóróng l. 11 *for no read not* and add sign*.
 " " " " l. 20 dele Sing hok' tree skin = bark.
 " " " " l. 22 dele flesh cover.
 " " " Lámlichóng l. 6 *for root sex repeated read root : sex sign repeated.*
 " " " " l. 8 add ditto.
 " " " " l. 19 add cover.
 " 357 " Sóngpáng l. 22 add U-yu.
 " " " Dúngmáli l. 10 dele sky bird and sign*.
 " " " l. 1 notes, dele from see flesh to sa *and for see other paper read*
 So also sing in sing hok = tree cover or bark. Hok or hokwa if alone takes the inseparable pronoun prefix, hence umhowka = its cover, but if sá be used the compound sahokwá needs no such pronoun adjunct.
 Page 357 at bottom add Sec on to note at His, Her's Its.
 " 358 col. English l. 9 dele Thee.
 " " " " l. 11 dele Himself.
 " " " Báhing. l. 5 *for Sevalachá read* Swalachá, and add note Swalachá, m. Swalami, f. Here the suffix chá takes the place of wá in gna wa gna mi, &c. aforegone.
 Page 358 col. Báhing. l. 9 dele Na.
 " " " " l. 12 dele O-ú.
 " " " Lóhóróng l. 9 dele Hana.
 " " " " l. 11 dele Mo. Mosc.
 " " " Lámlichóng dele l. 8 and 9.
 " " " " l. 11 *for Toma read* Tona.
 " " " " dele l. 12 and add note,—The 3rd pronoun is always minutely specific, not merely as the person referred to is near or far off the speaker but as he is on a level, or above or below him. Yona Mona Tona mark these latter distinctions.
 Page 358 col. Bálali l. 10 dele Mo ó.
 " 359 " Báhing. dele l. 3.
 " " " l. 2 from bottom add See p. 171.
 " " " last line *for* Akoi sing *read* Akoim sing,—and add—Sec back to note at Plant.
 Page 360 col. English dele l. 3, 4, 5, 6.
 " " " " l. 9 dele generic signs S. D. P.
 " " " Báhing. dele l. 6, 7, 8, 9.
 " " " Lámlichóng l. 4 add note—In Lambichhong Balali, &c. the dual and plural are not throughout discernible.
 Page 360 col. Lámlichóng dele ls. 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20,—these being merely author's notes of comparison with the Dravida tongues.
 Page 360 col. Bálali l. 9 add Hippang.
 " " " " l. 10 add Sumbung.
 " " " " l. 11 add Libang.
 " " " Sóng-páng l. 5 add Euli.
 " " " " l. 6 add Hissali.
 " " " " l. 8 add Sumkali.
 " " " " l. 10 add Lakkali.
 " " " Dúngmáli l. 7 *for m. po read m : Po.*
 " 361 col. English dele ls. 8, 9, 10.
 " " " Báhing. l. 14 add note,—Genitive sign rarely used, never when two words united as horse's foot, silver jug, &c. 1st of two nouns by position alone is genitive.
 " " " Lám. dele ls. 1—5.
 " " " last line dele 1 cow, 2 cows *and for* &c. *read* two men &c. The separate form is Itta = Ikku of Balali.
 Page 362 col. English and Báhing. lines 14—17, *read thus :*
 Above, on top. { A juñ di (*its head in*).
 { Hátyu. Apiye di.

Below, on bottom. { Háyu. Apum di.
 (its bottom or base in).
 1. 18 dele on middle.

" " " " " 363 col. English l. 19 *for* primitive *read* privitive.
 " " " " " 1st line from bottom *for* Hona *read* Khona.
 " " " " " 2nd line from bottom *for* wa *read* wo—in the same line *for* wa *read* wo.
 " " " " " 5th line from bottom *read* up, &c. Kugna *for* up, Kugna.
 " " " " " 6th line from bottom add 1 before Pi-gna—add 3 before Pi-Rá add 1 before Pi-te.

Page 363 add in the bottom,—See prepositions, adverbs and verbs in sequel.
 The expression of position is thrown as much as possible on the verbs, there being very few proper adverbs, thus go up is either ascend, or, its top to go.

Page 364 col. English l. 2 dele Dual Pl.

" " Báhing. l. 5 *for* Syu, séu, &c. *read* Caret.
 " " " " " 1. 15 dele tung-o.
 " " " " " 1. 23 dele syo.
 " " col. Lóhóróng l. 9 dele causal mette.
 " " " " " 1. 12 and 17 add D.
 " " " " " 1. 13 add Pl. chai mette and add note,—Mette is every where the causal, thus chaye makes chayemette and Dunge Dungmette, Ime Immette and Poge Pogmette.

Page 364 col. Lóhóróng l. 14 dele Dung mette Cha cho mette.

" " " " " 1. 18 add Pl.
 " " " " " 1. 19 dele Immette.
 " " " " " 1. 20 *for* Ipseche *read* Imache.
 " " " " " 1. 24 add C.
 " " " " " 1. 27 *read* Icheche, D. Ichane, Pl.

Page 365 col. Lohorong l. 2, 16, 19, 22, 25, 28, 31 add D.

" " " " " 1. 3, 8, 11, 14, 17, 20, 23, 26, 29, 32 add Pl.
 " " " " " 1. 5 add or aud dele mete.
 " " " " " 1. 6 add or.
 " " " " " 1. 7 *for* —che *read* —gache and add D.
 " " " " " 1. 10 *for* —che *read* —ache and add D.
 " " " " " 1. 13 *for* —che *read* —ache aud add D.
 " " " " " Lámichhong l. 27 dele Pita.
 " " " " " 1. 28 *for* chu *read* Piruchu and after P add note—Pirang give to me makes dual in ching and plural in ning: but pira give to any, has chu and nu respectively.

Page 365 col. Khaling after l. 10 add Biye.

" 366 col. Báhing. l. 5 *for* Tyú-po *read* Lommette causal.
 " " col. Lohorong l. 2 dele Lom-mette.
 " " " " " 1. 5, 10, 22 add D.
 " " " " " 1. 6, 23, 28 add P.
 " " " " " 1. 8 dele Its causal Sed mette.
 " " " " " 1. 11 add P. causal Sed mette. Sed metta che D. Sed mettane, Pl.

" " " " " 1. 16 *for* —che *read* Ladappache D.
 " " " " " 1. 17 *for* Ladapam *read* Ladapamne P.
 " " " " " 1. 18 dele —ne.
 " " " " " 1. 20, 25 add vel.
 " " " " " after l. 24 add Yuksache D. Yuksamne P.
 " " " " " 1. 27 *for* —che *read* Thepogache D.
 " " " " " Dúngmáli l. 13 *for* Kha-ye *read* Kha-de.

Page 367 col. Lohoroug l. 15 *for* —che *read* Isache.

" " " " " 1. 18 add D.
 " " " " " 1. 19 dele not good.
 " " " " " 1. 20 *for* meha *read* miha P.
 " " " " " 1. 21 add chia-miha.

- Page 367 col. Lóhóróng l. 23 *for* ne-ma *read* ne-ohia-mia.
 " " " " after l. 26 add —mia.
 " " " Lámichhóng l. 1 to 4 *dele* Numda, &c. down to suffix.
 " " " " l. 12 *dele* yuk = yak.
 " 368 col. Lóhóróng l. 2 & 8 add D.
 " " " " l. 3 & 9 add P.
 " " " " from lines 12 to 15 *dele* Tum te &c. and add The verbal forms are Tumte, imperative. 1. Tumtigna. 2. Tumtane. 3. Tumta, indicative.
 Page 368 " " l. 17 *dele* limte.
 " " " " l. 19 to 21 *dele* Lim ku gna, &c. and add so also Limte. Be sweet whence Indicative Limtigna vel Limukgna, I am sweet, &c. And Khiktigua vel Khikgna. I am bitter, &c.
 Page 368 " " l. 23 *for* not *read* sweet not.
 " " " " *dele* lines 26 to 29.
 " " " " l. 30 & 34 add D.
 " " " " l. 31 & 35 add P.
 " " " Lambi. l. 1 *dele* Bon est.
 Page 369 col. Lóhóróng l. 3 add --chia D.—mia P.
 " " " " l. 5 add mia.
 " " " " l. 7 add—chia-mia.
 " " " " l. 11 *for* Bí ha *read* vel.
 " " " " l. 12 add to Biye—chia—mia.
 " " " " l. 15 add to Phíye—chia—mia.
 " " " " l. 16 add chia-mia.
 " " " " *dele* foot note.
 " 370 col. Bálingyá l. 2, 3, 5, 7, 11, 12, & 13 add—daasi and—daa.
 Page 371 col. English l. 2 *for* of *read* or.
 " " transfer lines 9 and 10 above lines 6 to 8.
 Page 371 col. Bálingyá l. 2 & 4 add daasi daa.
 " " " l. 9 add foot note Sé = flesh : neuba = good : guolo = great.
 " 373 col. English after line 34 add Evening Nomothipsing.
 " " " Váyu l. 38 *for* swam *read* swom.
 " " " " l. 5 *for* got *read* Got and add note to line 6 Wo for the males, mi for the females. Angki namsang = our own smell, Gyeti namsang = other smell. Therefore the suffixes wo and mi here form derivative substantives. In Ta-wo, Ta-mi they are merely sex signs. See on to adjectives for other uses.
 " " " " l. 1 to 3 from bottom add note Chhyang is the instrumental and vi the agentive suffix. The verb is to p' to strike.
 Page 374 col. Váyu l. 8 *for* Mechho-túnvi *read* mechho-túnvi.
 " " " " l. 14 *for* khoeni *read* khocho.
 " " " " l. 18 add to Pok (abrupt accent).
 " " col. English last line add Morning, Nomoloksing.
 " " " Váyu l. 9 from bottom *for* Mynung *read* Minung.
 " " " " l. 6 " " *for* Cháju *read* Chháju.
 " 375 col. English l. 12 *for* Oor *read* Oar.
 " " " Váyu 2nd col. l. 17 add to Puchíhí rú = head bone.
 " 376 col. " l. 1 *for* Choli *read* Choti.
 " " " " l. 7 *for* pronoun conveys *read* pronoun or verb conveys.
 " 377 l. 3 of foot note *for* gothpto' *read* gothato.
 " 379 1st col. Crude l. 44 to Luphta add (Lusta).
 " " col. Affixes l. 8 *for* Participal *read* Participial.
 Page 379 col. Affixes l. 10, add to follow. †Observe that all the numerous adjectives ending in vi, ta, or tang, are really participles, and also that none of them take a formative suffix such as belongs to the adjectives proper, as noli'ka, good. But in truth such adjectives almost never affix these signs, thus noli'ka tawo is a good boy and noli'ka tami is a good girl, and noli'ka sing-phun is a good tree. If you add the sign to a proper adjective, you make it

substantival, as *nolika wo* the good one (male). Adjectives derived from substantives (abstracts) indispensably require the suffixes, e. g. *cnoti* strength, *chotiwo*, strong, and also the strong one. See further remarks under the head of substantives.

„ 380 l. 13 *for* Healthful *read* Asleep.

„ 3 from bottom of note add and *tuntang*, what fit to be drunk.

„ 381 1st col. l. 23 *for* assert *read* apert.

„ „ 3rd „ l. 4 *for* partic *read* participial.

„ „ l. 16 *for* Participial *read* Participial.

„ „ l. 23 add Participles.

Page 383 2nd col. l. 15 dele *má*.

„ 384 1st „ l. 8 add *or*.

„ „ 2nd „ l. 24 *for* Pinkumu *read* Penkumu.

„ „ „ l. 33 add Genitival. But the *mu* neuter sign not required with *nolika*. With *jingsa* and with *jekhom* it is for they are substantives. See p. 379.

Page 385 2nd col. l. 13 *for* Chhingjinn *read* Chhingji.

„ „ „ l. 16 *for* Jishta *read* Jista.

„ „ „ l. 30 *for* Kwonghlet *read* Kwongkhet.

„ „ 3rd „ l. 1 *for* Participle *read* Participial.

„ „ „ l. 7 add — *mu*.

Page 386 1st col. l. 22 *read* fixed, firm or unshakeable.

„ „ 2nd „ l. 24 *for* Méece *read* Mélbe and add as note, *Mé* = fire: *Mébé* *khosta* dressed in fire or with fire. *Tí* = water: *Tíbe khosta* dressed in or with water.

Page 387 add at bottom. N. B.—In reference to the suffixes, *wo*, *mí*, *mu*, See notes at p. 57 and 59 and 63. One of the equivalents for *wo* is *cho*, and *pú* is another. But the latter is rarely used and the former can be used with the ordinary signs of sex superadded as *bing-cho* = handsome and *bang-cho* = adult, whence *bing-cho-wo* formosus, *bing-cho-mí* formosa.

Insert the Numeral Collectives at p. 393 after the *Vayu* Numerals in p. 388.

Page 389 at l. 19, 27 & 44 add foot note. All these forms in *hé*, and (with the root doubled) in *há* are gerundial; see on to p. 436 &c. As the Adjectives are so often participles, so are the adverbs (and prepositions too, in less degree) gerundial.

Page 390 2nd col. l. 19 *for* *Mi* &c. *read* *Mi*, or *Wáthi*, *lom khén*.

„ 391 „ „ l. 2 *for* *Kha khakha* *read* *khakkhakha*.

„ „ „ l. 27 add after *Vinvinha*, (rounding, or rather, having rounded).

„ „ „ l. 51 *for* *Cho'mi ithijila*, *read* *Chomi*. *Hatha ithijila*.

„ 392 1st col. l. 36 *for* Modestly *read* Modestly.

Page 393 2nd line from bottom add foot note. Literally, in the top and in the bottom for upon and under, super et infra. This form of prepositions, i. e. locative of the noun, is common owing to rarity of prepositions proper or case signs.

Page 394 2nd col. l. 5 & 6 *for* *he* *read* *é*.

„ „ „ l. 19 add foot note. †Observe that *bek* is *come in*, and *bekla* *go in*. So *lok* is *come out* and *lokla* is *go out*. The root *lá*, to *go*, is thus added to many verbs.

Page 395 „ „ l. 3 & 4 put *

„ „ „ l. 5 *for* *lutimrekrá* *read* *lutimrekkúnchúng*.

„ „ „ l. 21 *for* *wanhé* *read* or *Cháju wanhé*.

„ „ „ l. 23 *for* *luthe* *read* or *Cháju luthé*.

„ „ „ l. 28 *for* *yongha* *read* *yonkha*.

Page 396 „ „ l. 7 dele *nungua* and add *Kamung nungua*.

„ „ „ l. 32 add foot note. Better *Achho chep'chephá sastum*. Literally, his body having perforated he pierced.

Page 397 „ „ l. 21 *for* *mú* *read* *mü*.

„ 398 „ „ l. 12, 34 and 43 add foot note. The *s* is essential, *phasto*, as proved by the conjugation which see. But in the imperative it is as spoken replaced by an abrupt accent, *pha'to*. In general, such an abrupt accent

before the sign in verbs transitive indicates a euphonicallly dropt consonant identical with that of the sign, so that the doubling of the sign of transitive verbs may be looked upon as the normal form, as proved by the conjugations, thus *pho'ko* = beget is *phokko* a derivative of *bok'* = be born, and *pu'ko* = awaken is *pukko* a derivative of the neuter *buk'*. Here are neuters made transitive by redoubled sign, added to a hardening of the initial consonant which is seen also in *dum* = become. Whence *thum* = cause to become. But besides this, the abrupt tone in transitives denotes a radical consonant similar to that of the sign and necessarily to be restored, thus *to'po* = strike must be *toppo* and *chi'ko* = break, *chikko*, &c.

Page 401 1st col. l. 27 add *Ride*.

" " " " l. 29 *for Irde read Irride*.

" 402 2nd " l. 14 *for phá'to read phá'sto*.

" " " " l. 17 *for pinu read ping*.

" 404 " " l. 27 *for thá read that'*.

" 405 " " l. 49 *for Po'ko or Pu'ko read Pu'ko pukko'*.

" " " " dele last foot note.

" 406 " " l. 2 from bottom add (*Tokko*).

" 407 " " l. 27 add (*Poppo*).

" 408 2nd col. l. 36 add (after *Theko*)—*Thésung, Thesche. Theto*.

" " " " l. 48 add, * *Lún* expresses run this way; *Lún lá* run that way, i. e. to and from the speaker. So also *Rú* and *Rú lá* just ahead and all other neuters to which *lá* is added.

" " " " l. 49 dele * and foot note.

" " " " l. 50 add (*phasto*). *Lungpingko*.

Page 409 1st col. l. 23 dele or.

" " " " l. 45 and 48 *add* or him.

" " 2nd " l. 4 add note * *Rú* expresses flee, or flee here. *Rúla*, flee away, free from.

" " " " l. 16 add note † *Hanto* is causal as well as the next and normally causal form. *Hánto* is one of the numerous class of verbs which are at once transitive and causal in which the distinction of the two sorts of verbs is lost.

" " " " last line *for Suksa met'pingko not'pingko read Suksa met'pingko or Suksa not'pingko*.

Page 410 1st col. l. 16 *for cover read covert*.

" " 2nd " l. 13, 14, 19 & 22 *for pháto read phásto*.

" " " " l. 24 *for Jekhom ponchedum read Jekhom ponche, Jekhom dum*.

" " " " l. 31 add after *dúm*, (*become*).

" " " " l. 45 add (*phokko*).

Page 411 " " l. 14 add. *Thá totnachihe, D*.

" 412 1st col. l. 10 *for been read him*.

" " 2nd " l. 19 *for Nek'pingto read Nek'pingko*.

" " " " l. 26 add foot note to *Thukto*. ‡ *Duk* neuter makes *thuk* transitive by initial hardening, just as *dúm* = become makes *thúm* causal or transitive. Of *thukto* *thukpingko* is the normal causal; but the latter is one of the numerous class of double causals, *thukto* being itself a causal. These double causals regularly formed, constitute one of the many correspondencies with the cultivated Dravidian tongues.

" " 1st col. l. 8 from bottom add (*phasto*).

" 413 2nd " l. 4 add Literally stay, verbally, by word.

" " " " l. 14 add to *Lu'ko* (*lukko*).

" " " " l. 21 *for Teshto read Testo* and add *Tessung. Tesche*.

" " " " l. 22 add Literally, in thee wealth be or become.

" " " " l. 33 add *Mum pingko*.

" 416 " " l. 2 add (*phasto*).

" " " " l. 8 *for Lunthe read Lumehe*.

" " " " l. 29 add foot note.† See note at p. 408. *Dóng* = arrive here. *Dóng lá* arrive there. *Só-yú* = come down and *Yúlá* = go down.

Page 417 2nd col. l. 17 from bottom add foot note.† In composition lá only is used, as Beklá, Loklá, Yulá, &c.

„ 418 1st col. l. 7 dele, tr.

„ „ „ „ l. 9 for Increase in length, n. *read* Increase thyself in length or be lengthened.

„ „ „ „ l. 19 add tr.

„ „ 2nd „ l. 17 for vik ye ko *read* vik yekko, and add foot note. §Yekko, rukko, chokko, &c. are the true forms as proved by the reflex, causal &c. of each, and it is important to give them correctly in the imperative because the conjugation depends thereon, though in speech these imperatives avoid the cacophonous iteration of consonants (yek-ko, ruk-ko) by merging the first or radical one in an abrupt accent ye' ko, ru' ko.

„ „ „ „ l. 31 & 38 same note.

„ 419 „ „ l. 2 & 10 for Peshto *read* Pesto.

„ „ „ „ l. 6 add Tú pingko.

„ „ „ „ l. 8 add Sé pingko.

„ „ „ „ l. 19 add Takko.

„ „ „ „ l. 21 for késung *read* késung.

„ „ „ „ l. 22 for Yo'ho *read* yekko.

„ 420 1st col. l. 7 for weight *read* weigh.

„ „ „ „ l. 3 for Thengko *read* Phengko.

„ „ „ „ l. 7 for Pu'ko, püksang, *read* Po'ko pukko, püksang.

„ „ „ „ l. 10 add or Tha puk'.

„ „ „ „ l. 21 after Piko add Pisung, Pi'che, Pito.

„ „ „ „ l. 25 (beat) for topsung *read* (beat) toppo topsung.

„ „ „ „ l. 27 after chu'ko add chukko.

„ „ „ „ l. 29 for chyásung *read* chyásung.

„ „ „ „ l. 44 add Sásche, Sásung.

„ „ „ „ l. 48 for chitó *read* chito, chisung, chiche.

„ „ „ „ l. 55 add to chi'po chippo.

„ „ „ „ l. 2 from bottom for phato *read* phasto and to chho'po add choppo.

„ 421 1st col. l. 37 & 38 add See p. 424.

„ „ 2nd „ l. 9 for vekpháto *read* vekphásto.

„ „ „ „ l. 16 add Rúpingko.

„ „ „ „ l. 35 add Ji.

„ „ „ „ l. 36 add Jito. Jísung. Jinche.

„ „ „ „ l. 38 for hhláng-nó-dúm, *read* ehhláng-nó-dum.*

„ 422 „ „ l. 8 add yekko.

„ „ „ „ l. 10 for Nengle *read* Nengla.

„ „ „ „ l. 12 add Ningche.

„ „ „ „ l. 13 add Ningsung.

„ „ „ „ l. 14 add Nengpingko.

„ „ „ „ l. 12 from bottom add to Blento foot note ‡l is a constant ad libitum in fix after initial b.

Page 423 „ „ l. 23 add foot note† Wash body = bathe is rip'ehe.

„ „ „ „ l. 27 add (phasto).

Page 424 2nd col. l. 4 after Tophto add Tosto.

„ „ „ „ l. 12 for Dáwáng Bocho, posung or posung *read* Dáwáng or Bocho, posung or pasung.

„ „ „ „ l. 13 for Dáwáng, Bocho, páanche *read* Dáwáng or Bocho páanche.

„ „ „ „ l. 19 for Ná'to, nassung, nasche *read* Nasto, nassung nasche.

„ „ „ „ l. 35 after Hon. (khon) add Hontadún.

„ „ „ „ l. 38 for phato *read* phasto.

„ „ „ „ l. 2 from bottom add Khokta thumto.

Page 425 2nd col. l. 3 add to Lok, foot note.* Bek and Lok alone express the meanings, and the lack of empty words in this tongue causes it as often as pos-

- sible to dispense with adverbial forms of speech thus, for come in it uses *entér* (bek) and for come out issue (*lok*) or appear.
- Page 426 1st col. l. 38 *for* Behind the house *read* Behind, in back of the house.
- „ „ 2nd col. l. 20 *for* Háhá pánachhe pochihe, Duals *read* Haha pánnachihe vel ponchihe, Duals.
- „ „ „ „ l. 27 *for* (no Dat. or acc. sign.) *read* Kem (no Dat or acc. sign).
- Page 429 *for* Comparative Vocabulary of the Languages of the broken Tribes of Nepal *read* Grammar of the Váyu Language.
- „ „ l. 17 *for* nárgung *read* náyung.
- „ 430 l. 5 *for* Gonargung *read* Gonayung.
- „ 435 l. 8 *for* grammar *read* declension.
- „ 441 dele note.
- „ 442 l. 3 from bottom *for* in comparison *read* which in composition only, is.
- „ „ add note to Pl. Im. Mood. The singular, dual and plural here refer as usual, to the agents. Those which follow refer to the objects the combination of which with the agents in the conjugation of verbs (transitive) constitutes the peculiarity of this language, as of the following wherein it is more fully carried out.
- Now turn to the passive voice and you will see the positions of these personal endings reversed, the starting point being the citation of the objects or patients whence the verb becomes passive, so far as that voice can be said to exist. The inversion, however, though usual is not quite indispensable. See remarks in sequel. Passivity is denoted by the object : but so also is transitivity ; and hence the many forms common to both voices. They are denoted by a cross † prefixed.
- Page 445 after line 22 add of the object* and foot note. See note at page 442.
- Page 449 *after* negative mood *add* of indicative singular.
- Page 450 after lines 25 and 34 add of the object* and foot note. “See remark at p. 126.
- Page 451 l. 2 from bottom *for* Sista nó-dum *read* Sista { no.
dum.
- „ 452 l. 3 *for* dam *read* dum.
- „ „ l. 18 dele kha.
- Special forms at pp. 452 and 457 to be inserted at the end of the ordinary conjugation, or after “Causals” of sequel.
- Page 453 last line add top-po.
- „ 455 after line 29 add of the object.
- „ 457 at top add Indicative present.
- „ „ l. 2 *for* sheer neuters (see phi) *read* pages 451, 452.
- „ „ l. 3 from bottom *for* prior note at Sislito *read* prior verb, pp. 451, 452. and add after Váyu active and passive.
- Page 464 l. 3 add foot note. *Observe that these are singular, dual and plural of the *object*, as noted elsewhere.
- „ 465 Special forms to be inserted after continuative Mood in p. 465.
- „ 467 add to line 4 from the bottom (potius Phok).
- „ 468 l. 5 add (phokko).
- „ 481 l. 11 *for* equal fusion in both cases *read* equal degree of fusion in regard to both noun and verb.
- „ „ l. 27 *for* 3rd *read* 3.
- „ „ l. 30—36 *for* compare &c. &c. *down to* strike *read*
- | | | | | | |
|--------------------------------------|---|---------|---|---|-----------|
| † á-pá, my
í-po, thy
á-po, his | } | father. | } | { teub-ú, I
teub-í, thou
teub-á, he | } strike. |
|--------------------------------------|---|---------|---|---|-----------|
- Wherewith comparo
- | | | |
|---------|----------------|---------------------------|
| | Sontal | and Knswar. |
| apu-ing | dal-eng, aing. | Baba-im. Thatha-iw-ik-an. |
| apa-m | dal-me, am. | Baba-ir. Thatha-ir-ik-an. |
| apa-t | dal e, ai. | Baba-ik. Thatha ik-an. |

Page 484 l. 23 add foot note. ‡ Take notice that this sample of the language is also meant to exhibit the status and condition of the people as viewed by themselves.

„ „ l. 24 *for* Páte *read* Pachya.

Page 486 *for* BAHING VOCABULARY *read* GRAMMATICAL ANALYSIS OF THE BAHING DIALECT OF THE KIRANTI LANGUAGE.

„ „ 2nd col. l. 16 add foot note. † So from Koja = belly is formed kojacha = glutton; and from Khojim = house, Khojimcha = householder.

Page 488 1st col. l. 7 and 35 add foot note. Formed respectively from kholi = leg and gú = arm. The suffix blem is a segregative indicative of the class of flat things.

„ „ 2nd col. l. 29 *for* Rúpachó *read* Rúpacho grokso.

„ „ „ „ l. 30 *for* Grokso *read* Rúpachóme.

„ „ last line *read* ú the first person = wa of the noun.

„ 489 1st col. l. 11 add Lowland = Dhípté.

„ „ 2nd col. l. 23 add apobing.

„ „ „ „ l. 24 dele Gia.

„ „ „ „ l. 25 dele Gai atámi.

„ „ „ „ l. 29 add note ‡ See note at urine.

„ 490 last line add literally, cane its juice.

„ 491 1st col. l. 5 *for* Muryuácharniku *read* Muryeuácharniku.

„ „ l. 6 add note § Múryeu á charnika, mankind, its urine. Songara á charnika, goat kind, its urine, the common form of the genitive. See “ordure.”

Page 492 1st col. l. 17 *for* bokab *read* bokba.

„ „ „ „ l. 2 from bottom *for* both are senses *read* both senses.

„ 495 „ „ l. 3 from bottom add after wala, of Urdu.

„ „ „ „ l. 2 from bottom *for* Gigimmo *read* Gigimmé.

Page 497 2nd col. l. 24 *for* Kwong ásim one score = Kwong and one *read* Kwong ásim Kwong = one score and one.

Page 500 2nd col. l. 4 add excl.

„ „ „ „ l. 5 add incl.

„ „ 1st col. l. 27 add foot note. ‡ Observe the gí, to be born, becomes by hardening kí, to beget. But kí also means, cause to be born and so far is a causal though the ordinary causal is formed by páto. Hence if we add pato to the transitive kí we have a double causal. This is common to all the verbs of the sort and is a Dravidian trait.

„ „ l. 5 from the bottom *for* woncho *read* wonche.

„ 501 1st col. l. 3 *for* Thiyato *read* Thipato.

„ 512 1st col. l. 2, 3 and 4 *for* Thyangso *read* &c. &c. Phyangso.

„ 515 1st col. l. 42 add foot note after Khyimá gwárc. Khyim á-gwárc, literally, house, its interior in. This use of the conjunct pronominal sign in lieu of a genitive (house its inside) and of a noun in the locative case, in lieu of an adverb or preposition, are both normal and common to this and the foregone language.

Page 518 2nd col. l. 37 *for* riskso *read* Namrikelio.

„ 519 2nd col. l. 20 *for* Newar dau khwog no, *read* Newar dau khwog no.





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